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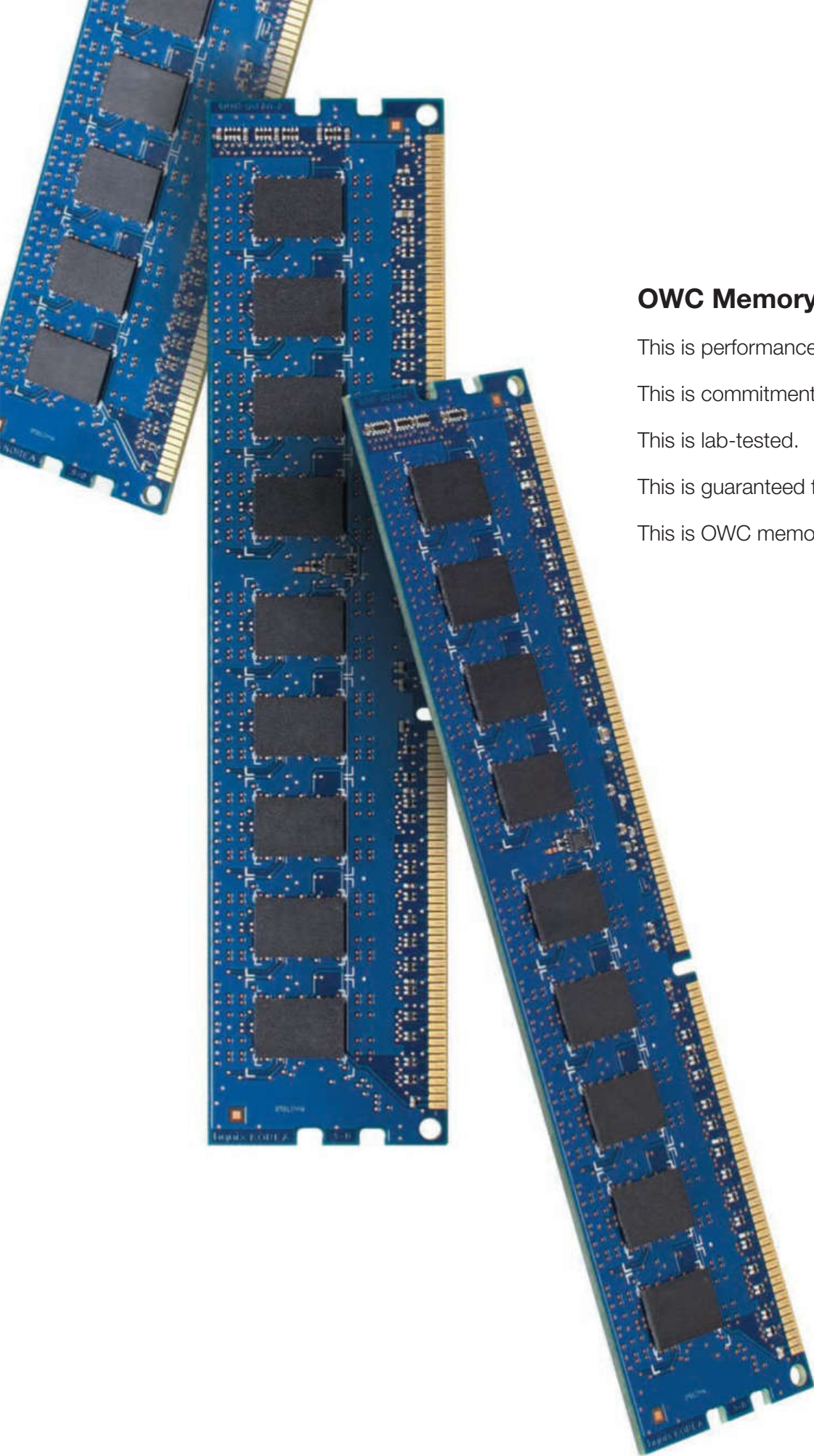## AUSTRALIA

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Star date: 46254.7

One of the fun things about my work is getting to play with lots of interesting gadgets. About 15 years ago, I remember reading about the house Bill Gates was building in Seattle with his then new wife Melinda.

A major feature of that home was automation. When guests arrived at the house, they'd be presented with a pin that would activate various devices as they moved around the house, according to their personal preferences. At the time it was practically science fiction.

Over the last few weeks I've been playing with some home automation gear and a new app on my iPhone. In my home I've been using various devices from WeMo – Belkin's new home automation product range. Being able to control lights and other devices has made it easy for me to better manage my power use and automate operations, so that it looks like my home is occupied even when I'm not there.

But there's a downside. I'd really like to control all my devices from a single app. For example, I have a pair of Sonos speakers at home. What I'd really like is a single tool that turned on the lights, dimmed them appropriately and turned the music on to my preferred online channel. Today, I need to open separate apps to do what to me feels like a single activity.

In the car, I've started using an app called Tour – we looked at it briefly in last month's iOS app guide. If you need to maintain a vehicle logbook for work, it's a great time saver. Interestingly, it can use iBeacons, so the software knows when you get into the car. And there are also other apps that integrate with WeMo, as well as other home automation systems to bring it together.

It still looks like it's hard work, however, and it will require companies to simplify the integration.

We're coming up to the time when the next versions of iOS, watch OS and OS X will be here. Jason Snell takes a deep look at El Capitan and Adam Turner looks at a number of different smart lamps – the gateway drug to home automation in my view! Christopher Phin pays tribute to his recently retired 2008 MacBook Pro – try finding a PC-toting friend with a seven-year-old notebook that's still going strong!

As usual, we've got lots of reviews, news, tips, tricks and the prize-winning photo from iSnap.

Have a great month!

STAFF PICKS

As we think about home automation – what's the job you do regularly that you most want to have automated?

ANTHONY CARUANA

Every morning, regardless of when I wake up, I want a warm skim caffé latte waiting for me on the kitchen bench.

MADELEINE SWAIN

SCHOOL. BLOODY. LUNCHES.

JAMUNA RAJ

It would be nice to have my laundry folded and sorted for me.

MONIQUE BLAIR

I wish I could automate a prepared lunch rather than the daily bolt up the street for snacks.

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(niche:) DIGITAL

HAVE YOUR SAY

LETTER OF THE MONTH

COSTLY GADGETS

Most of *Macworld Australia* I find is great reading, and I particularly enjoyed the recent article on Siri.

However, the Gadget Guide seems to feature only the top end of the price range. A kickstand case for iPhone 6 at $64.99, an Adonit stylus at $129.99, and a Tabletop Radio at $449 are all highly priced. Google the products or their equivalents and you will find a range of products at a range of prices. I know you have to pay for quality, but how much?

A recent purchase of a charging stand for an iPhone 4s cost me $6, including postage from China. Paid for by PayPal, delivered within five days from order, and a happy customer thank you. Not so good, a charger for my MacBook Air set me back $28 ($99 from Apple) and arrived OK, but it did not function properly. I raised a complaint with PayPal and they promptly refunded me in full. Although I have not bought them, both an iPhone case and a stylus are available from eBay and others from about $12 upwards.

All in all, a bit more effort, and sometimes more hassle, but definitely worth it, especially if you are a bargain hunter like me.
Sam Luxemburg

Thanks Sam.

That's a great reminder for us. We can be a little spoilt here at *Macworld Australia* as we get to play with the latest and greatest gear and can get carried away. Every couple of weeks, I do a walk through some of the local retailers to see what people are looking at and where real world prices are.

However, we'll do a better job of looking for products across a range of different prices, so that we've got something for everyone.

Well, there's nothing like a story about broadband access and the Australian digital divide to stimulate conversation by our online readers. Here's what a few of you had to say about the state of broadband access in Australia.

The introduction of NBN is being done on the cheap. I am about to have my connection joined from outside the house to the inside. I have been told that the contractors doing the work are allocated $80 per household to connect. They therefore opt for the easiest installation for them, but not necessarily the best location in the house for the occupant.

Another business that I know of has a contract to fix up the mistakes the first contractor made. Where is the sense in all this?

And what is now the government policy on future installations? They have been very quiet on the subject since taking office.
Steve Sanders

I sometimes think that it'd be better if I was still on dial-up [currently on ADSL2]… because there are times when I have little or no connectivity at all… and my closest Exchange is approximately four kilometres away.

I have a cable to the pole in front of my house, but am not able to connect as it's an Education Department connection only.
Mick McMillan

Since the mid 90s, [when] I moved in from the bush and even the suburbs I have lived in since then [my connection has] been determined by available access speed. I took this course due to many years of frustration with services, but it is not just broadband access that is a problem. It is virtually everything: medical, educational, cultural, retail, postal, rubbish collection, gas, legal, accounting, employment – the list goes on and I accept that you simply can't expect otherwise – these things will always be related to population density and it's unrealistic and unfair to expect otherwise.

I understand the frustration, and I wish it weren't so (as I'd love to be back in the bush myself) but connecting 'every' property in Australia to a fast line in two years just isn't going to happen, just as you aren't going to get hospitals, police or even gas in every two-horse town. It just isn't economically feasible, especially with the current state of financial affairs. Too bad the funds burned up in school halls and pink batts etc weren't instead used on equalising net access, but that is the point – when you ask governments to pick winners, they usually pick duds…
Andy W

Until the powers that be get their priorities right, we're doomed to be the laughing stock where communications are concerned, and while Rome burns the fiddlers play to the house, and to their own amusement.
Jan

We live in rural New South Wales, 10 kilometres out of Albury in table top NSW (new developing area) and are in a similar situation to your Queensland friends. We only have access to ADSL1 from Telstra. At dial-up speeds. No plans to upgrade to ADSL 2 as NBN is supposed to be arriving in the next 10 years if we are lucky. I am a medical specialist and require access to my work server from home. Not at those speeds. We rely on Telstra wireless 4G (it's not even 3G speeds, as we live in a black hole) and 15gb costs over $100. Only lasts for 15 days. Then it's back to 64kbbs. It sometimes takes 24 hours to update my Mac. We have just returned from Europe where householders have access to 200Mbps and business owners 700Mbps. This country is never going to be able to compete. Ever. I am a Kiwi. I think it's time to go home.
Richard Tustin

■ Letters should be emailed to editor@macworld.com.au with a subject header of 'Letter to the Editor' or by post to: Macworld Australia Mailbox, 142 Dorcas Street, South Melbourne, Victoria, 3205. Please include your full name and address, including state or territory.

■ Comments on stories or Forum posts on www.macworld.com.au are also eligible for the prize.

■ We reserve the right to edit letters and probably will.

■ Letters of fewer than 200 words are given preference.

This month's prize to the *Macworld Australia* reader who has submitted what we think is the most interesting letter is a WeMo Switch – a home automation device that lets you switch off electronics from your Android and iOS smart device via the free WeMo app. The WeMo switch retails for $69.95

The WeMo Switch lets you turn electronic devices on or off from anywhere. It uses your existing home Wi-Fi network to provide wireless control of TVs, lamps, stereos, heaters, fans and more.
www.belkin.com.au

HOT STUFF
A selection of Apple, Mac and iOS news from Macworld.com.au

WHAT DO ALL THE NEW APPLE PRODUCT RELEASES MEAN?

A heavily refreshed Apple TV, an iPhone where the only thing that has changed is everything (except the outside!) and a completely new iPad – what does it all mean?

SOFTWARE IS THE SECRET SAUCE

The various Apple execs that took the stage at Apple's September event went to great pains to tell us about faster processors, new ways to deal with noise in high-resolution images and all sorts of other very technical details.

While the speeds and feeds are interesting – it's the software that makes it all useful.

Apple announced, either loudly or subtly, no fewer than four different operating system releases.

WATCH OS2

Watch OS2 was released on 16 September Pacific Time (17 September in our patch of the planet).

The big ticket change here is the ability to run software directly on the watch. The initial release of Apple Watch seriously dumbed down Apple's newest platform, making it little more that a terminal for the iPhone. But developers can now create complications, watch faces, messaging apps and all sorts of other tools.

In other words, the Apple Watch has become a proper computing.

iOS 9

We've already looked at iOS 9's new features online and in this magazine. Suffice to say, this release continues to add new features and functions – many of which will only be usable if you spring for a new iPhone 6s or iPhone 6s Plus.

The new Peek and Pop gestures look interesting and the ability to carry out common actions by using the new 3D Touch system changes smartphone usability.

In short, the combination of iOS 9 and the new iPhone 6s and iPhone 6s Plus will have sent shudders through the ranks of Samsung and Google, as Android will be playing a big game of catch-up over the coming months.

TVOS

We've been waiting for this for some time but, finally, apps are coming to the Apple TV.

Like iOS 9 and the iPhone, tvOS and the new Apple TV is a potential game changer for the digital lounge room.

While the crowd during yesterday's special event swooned and gushed at the new remote control and ability to use Siri to control your TV, the likes of Sony, Microsoft and Nintendo will be a little less secure from now on as they contemplate what Apple could do to their markets.

The new Apple TV costs about half as much as most gaming consoles and can manage media far more elegantly. The new tvOS SDK, which most iOS developers will instantly be able to leverage, will deliver a slew of applications that we can't even imagine.

Business, education, gaming… there's not a use-case or scenario that won't be targeted.

We won't see tvOS in action until November when the new Apple TV hits the stores. And it won't run on older Apple TVs.
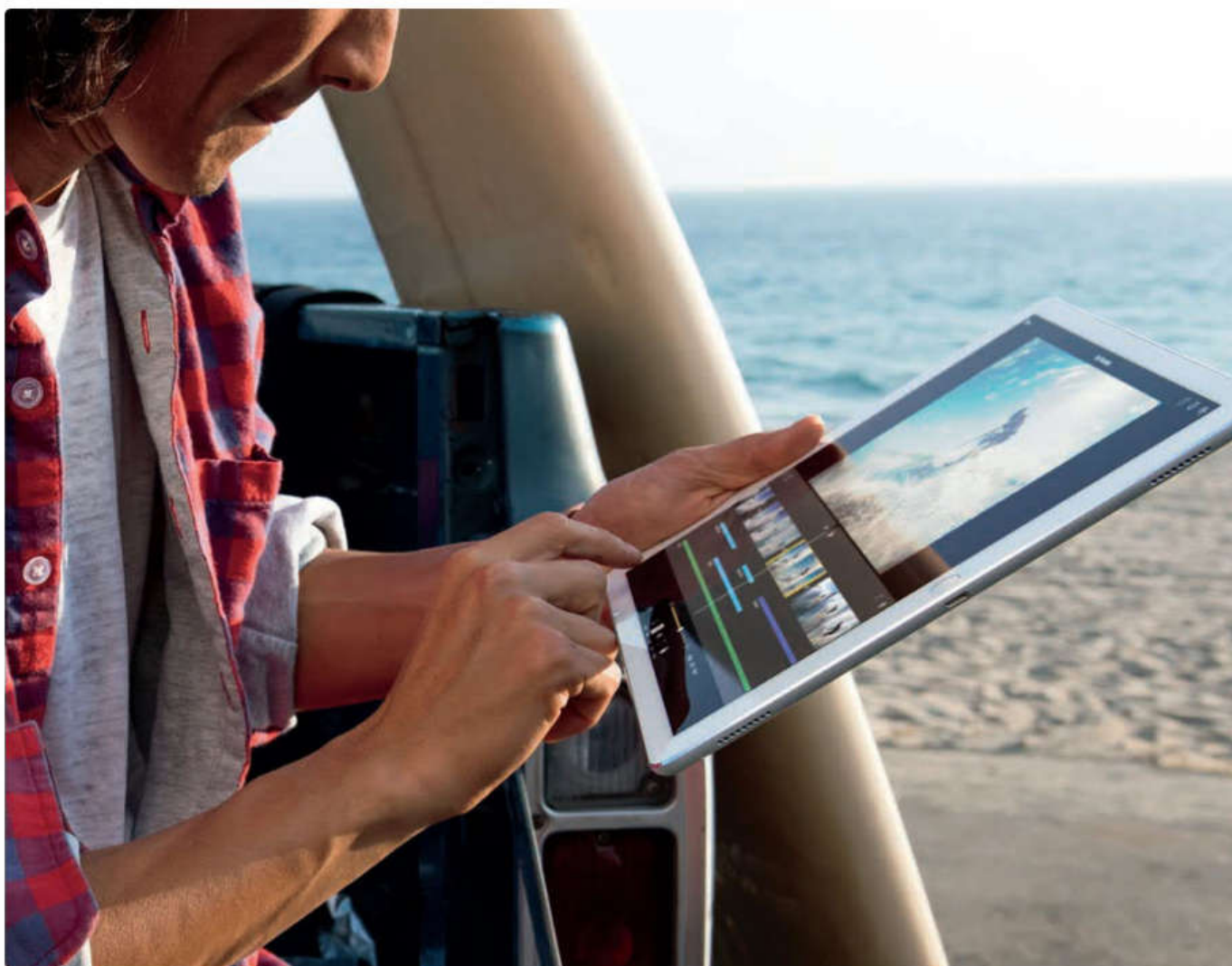
OS X EL CAPITAN

A couple of weeks after we update our iOS and Apple Watch devices, we'll need to fire up our updaters for the new version of OS X – dubbed El Capitan.

We won't say too much here as the software has been in public beta for many weeks, other than to say it's a significant release, even if Apple isn't making a big deal about it.

All the new software announced by Apple or set for imminent release continues Apple's grand plan to integrate every aspect of your life. While Apple may have lost the battle for the desktop during the operating system war of the 1980s and 90s, they are winning the war for the rest of your life.

In addition to the four new software releases we heard about in September, Apple released two significant new products and a couple of minor facelifts.

THE SMALL FISH

The iPad mini 4 and new Apple Watch Hermès collection didn't get a whole lot of attention yesterday – and that was about the right amount.

The iPad mini 4 received a speed bump, courtesy of a heart transplant. It gets an A8X processor, but is otherwise the same device.

The new Apple Watch collection adds some new case and band options, but under the covers it's the same as the hardware released earlier this year. Which is a good thing as new hardware released so soon after the initial release would have caused significant customer outcry.

THE BIG FISH

The three big product releases were the iPad Pro, iPhone 6s and iPhone 6s Plus, and the Apple TV.

The iPad Pro may have been in development for some time – the new Apple Pencil accessory, pressure sensitive screen technology and upgraded display haven't been created in a knee-jerk way. But we can't help feeling that the success of the Surface Pro, which has been displacing the iPad in many schools and capturing enterprise sales, forced Apple's hand.

It seems to be the same sort of market-driven product development that delivered larger iPhones a year ago.

The new iPhones may look the same on the outside but, unlike most iPhone 's' releases, looks to be worth considering. 3D Touch, improved cameras, faster processors, a new Touch ID sensor and haptic feedback suggest this is basically an all new model in old clothes – a bit like fitting a Porsche engine into a Yaris

HOT STUFF
A selection of Apple, Mac and iOS news from Macworld.com.au

– well, perhaps not a Yaris, but you get the picture.

Although we're running with an iPhone 6, we're thinking an iPhone 6s is definitely on the cards.

Apple's hobby project has become a bona fide member of the family. The new Apple TV includes inbuilt storage (just like version one did!) and the new controller, which uses Bluetooth to connect to the Apple TV, includes accelerometers and gyroscopes so it can be used for gaming and other apps.

Although we've also begun using a Chromecast for one TV (as it's a cheap option for getting Netflix and YouTube onto a second TV), we're rusted-on Apple TV users. So there's little doubt a new Apple TV won't become part of our lounge room setup.

In fact, if video playback apps that support non-Apple formats and support DLNA make it to the Apple TV App Store, then we may clear a gaming console out.

In short, the September product announcements were a big deal. The

Apple share price dropped a couple of percent following the announcements, but it's hard to know what the stock market is thinking or reacting to. With the iPad Pro and new Apple TV not hitting the market until November, we won't really know their impact on Apple's business until pre-orders open and sales commence.

But it's our view the new hardware and software represent significant steps forward.

Sunrise at Blackwattle Bay

Working near the newly opened Blackwattle Bay foreshore walkway that links Rozelle Bay and Glebe to the Sydney Fish Market gives this month's iSnap winner, Anatole Zurrer, ample opportunity to capture stunning views.

"The view of Sydney from here is unfamiliar to many Sydneysiders, but is very striking," says Zurrer. "It is a wide, uninterrupted vista crowned by Sydney Tower. On a clear morning the bay is calm like a lake and the sky is clear blue, with golden sunlight breaking up and silhouetting the skyline. I am born and bred Sydney, so I am biased, but I believe Sydney is the most photogenic city in the world. On this particular morning I felt the balance was just right, so I put my new iPhone 6 to work."

Zurrer has been a keen photographer for 30 years, finding peace and quiet behind the camera. Although he has invested in DSLR cameras and lenses, spending a lot of his time tinkering and finessing large files in Lightroom and Photoshop, his iPhone has allowed him to engage in extra photography time.

"I love it – small and powerful and with an ever-growing herd of photography apps I take lots of photos. Mostly for the web, but also to print. The quality of my iPhone 6 camera is great. I love it and I love the pan mode," he says.

Other than straightening the edges, Zurrer didn't make any other edits or adjustments. However, when he does edit on his iPhone he uses Snapseed.

"It just works on the iPhone better. I am a Mac devotee and use Canon gear and Epson printers," he adds.

When he's not working, Zurrer likes to travel and take photographs.

"Recently I got to photograph a concert inside the Sydney Opera House and that was a real buzz. I am in the process of slowly commercialising my photography, setting up a website, expanding my stock and getting my head around how and who to sell my work to."

With a passion for capturing Sydney through his lens, Zurrer says he can't resist the city's charms.

"From the street art on Bondi Beach to Vivid in the CBD, you are spoilt for choice and I can't resist her charms."

AUTOMATE YOUR LIFE

BY ANTHONY CARUANA

Star date: 46254.7. Captain Jean-Luc Picard walks into his quarters. "Lights – 35 percent, tea: Earl Grey, hot," he says to no one. A few seconds later all of the captain's requests are fulfilled.

Welcome to the world of home automation.

When *Star Trek: The Next Generation* was being made in the late 1980s and early 1990s, the sorts of applications and hardware that were common in that fiction were fanciful compared to what we could do at the time. Voice control, artificial intelligence, fast processors and storage – what was hard to imagine in a large computer system is almost here today and we carry it on our iPhones.

So, like the original series of *Star Trek* that foreshadowed the mobile phone, the crew of the Enterprise D demonstrated what we'd be able to do just a few years later.

Today, near ubiquitous connectivity, low cost sensors, Siri, Apple's HomeKit and numerous other standards, hardware and software make it possible to control and automate almost every device in our home from almost anywhere.

WHERE ARE WE HEADED?

The challenge with home automation, and pretty much any other emerging technology, is coming up with scenarios where it will be useful.

If you've hung around enterprise IT boffins you've probably heard about the Gartner Hype Cycle – we've mentioned it in the past, but in case you've forgotten, here's how it goes.

When a new technology is announced or developed it goes through five distinct stages in its life.

At the start, there's some trigger that makes it possible for the new technology to develop. If you think about new services such as Uber and Airbnb, the development of the smartphone and availability of data networks made it possible for developers to create new apps and services.

Once the new technology is created, lots of hype builds and there's what Gartner calls the "peak of inflated expectations". At this point, people are using words like 'revolutionary' and 'paradigm shifting'. If you follow technology, when this starts happening, it's time to get ready for the 'trough of disillusionment'.

At this stage, vendor and developer hype is failing to deliver on the inflated expectations. It's like when someone tells you to see a particular movie and tells you it's sensational. Your expectations are so high the movie can't be anything but a disappointment when you finally get to see it.

The good news is we can dig our way out of the pit and move towards enlightenment and, finally, productivity. That's when the technology matures, we set more realistic expectations and find a practical use for the new service or application.

Where are we with home automation? We feel that we're past the peak of inflated expectations. The good news is we don't think the trough of disillusionment will be too deep. While many of the products on the market are quite new (see our round-up of smart lights and Belkin's WEMO ecosystem on pages 60 and 64 respectively), the technology underpinning them is quite mature.

That means we're moving towards enlightenment and productivity quite quickly. Already, it's possible to remotely control many devices and there are frameworks and protocols in place for linking different devices and using features such as voice control.

However, it's still all emerging. That means having realistic expectations about what the technology can do today while keeping an eye on tomorrow.

Fortunately, Moore's Law is on our side. Sensors and processors continue to fall in price, so the cost of entry to basic automation is coming down. It's possible to automate and remotely control a lot of your home for under $1000.

Although that's not a paltry amount, it's a fraction of what it cost five years ago and we can do far more today.

The significant investments will come when major household appliances such as heaters, air-conditioners and refrigerators are connected to your smart home. But those will also deliver benefits in cost savings as you'll have much better control of them when energy prices fluctuate.

SHOULD WE CARE ABOUT HOMEKIT?

HomeKit is a curious beast and is one of the many signs Apple is planning to be a part of our entire way of living.

Long-time readers of *Macworld Australia* will recall that in the early 2000s, we had a section in the magazine called The Hub. It was a deliberate strategy for the magazine to walk in step with Apple's strategy for the Mac being the hub of your digital home.

Apple has not abandoned that goal, although its way of achieving it is different.

HomeKit is a framework that allows hardware and software developers to integrate their own solutions. It was introduced with iOS 8.

Until recently, if you wanted to set up a home automation system, you'd need to choose a vendor. Then you'd be committed to that vendor and whatever hardware and software they made available. If another manufacturer came up with a nifty device then you would, most likely, not be able to take advantage of it.

HomeKit allows hardware and software creators to build solutions that can work together using Application Programming Interfaces, or APIs. By using common APIs for the discovery, configuration and communication, it becomes possible for devices from disparate manufacturers to interoperate.

For example, your air-conditioning and lighting systems most likely are made by different companies and can't work together. However, if they are both HomeKit enabled, you can create a set of rules that dim the lights slightly and change the temperature by collecting power pricing information from a HomeKit-enabled electricity meter.

Although your comfort level may not be impacted – lights dimmed by 10 percent and a temperature change of a degree or two are not likely to be noticeable – you could save significantly when power prices are at their highest. It also means you can cut back on greenhouse emissions.

The control and monitoring of this can be managed by any iOS device and, in time, we'd expect this to be a feature of the Apple TV.

The neat thing about HomeKit is its openness. Almost any software developer or hardware maker can use it. However, there is downside – it locks you into Apple's ecosystem.

HOW DOES HOMEKIT WORK?

As HomeKit is a standard defined by Apple, in order for products to operate they need to be certified. That means looking for the 'Works with HomeKit' logo on the box. However, as it's still quite new to the market, it's possible that existing products might be retrofitted through firmware updates to work with HomeKit.

That's potentially good news if you have some home automation gear already installed, although there's no guarantee everyone will upgrade their gear. Our guess is that some equipment – particularly if it's more than a year old, may not be upgradeable to work with HomeKit.

Remember, that doesn't make it useless – it just means you may need to run two different systems side by side until your older equipment is ready for replacement.

Every HomeKit-ready device has a unique ID that is used during setup.

Once the device is set up on your iOS device, you can use Siri to control things, For example, you can walk into a room and tell your home to turn on the bedroom lights at 50 percent brightness. Or, if you group some devices such as the lights, coffee machine and TV, you can tell your home to get ready for breakfast. The the lights will turn on in the kitchen, the coffee machine will start and the TV will turn on to your preferred morning viewing.

BEACONS

Apple also supports iBeacons – a standard it published in 2013 for small devices that can transmit and receive information. These small devices use Bluetooth LE to broadcast and receive a signal.

As they use Bluetooth, the beacons (iBeacon is the name of the Apple-created standard – beacons are the devices) can react to your presence. For example, a beacon in a car can automatically launch your logbook software.

At home, you can have a beacon in the room that detects when a particular person enters with their iPhone or iPad. Then, appliances such as lights, music and climate control can be automatically started, set to the person's preferences, and turned off after they leave.

When Bill Gates built his home in Seattle, he created a system like this using pins that people wore on their clothes. Given practically everyone carries a smartphone, there's no need for the pin as a beacon and some smart software and hardware can achieve the same outcome.

THE STANDARDS GAME

The challenge of great home automation isn't a lack of innovation or clever ideas. The real challenge is integration.

For example, in our home, there are light switches, power points, an air-conditioner with its own thermostat, a heating system with another thermostat, a sound system that works with cloud services, a smart TV, router, exercise equipment and many other connected devices.

While point to point connectivity is easy – I can easily use an app to control the sound system, or another app to control the lights – getting some interaction between the two, so the lights dim and Barry White starts playing during a romantic dinner is the stuff of Hollywood and not suburban Melbourne!

For different systems to communicate, you need them to either speak the same language or communicate coherently with a universal translator that can take information in from one device and pass it on to another.

For that to work, you need some standards – particularly around connectivity and information exchange. If devices cannot communicate and react to each other's data home automation becomes very difficult.

Most of our mobile devices already use Wi-Fi and Bluetooth. So it makes sense for these communications standards to be used. Many switches and light bulbs use these as they make it easy for people to get started.

Bluetooth used to be notoriously power hungry, but recent changes mean

it no longer empties batteries in a few short hours. So, look for Bluetooth LE or Bluetooth Smart labelling if you're considering Bluetooth-enabled smart devices.

iOS, Android, Windows Phone, OS X, Linux and Windows 8 all natively support Bluetooth Smart, and the Bluetooth SIG, the body that manages the Bluetooth standard, predicts that by 2018 more than 90 percent of Bluetooth-enabled smartphones will support Bluetooth Smart.

The other home automation communications standard you may hear about is ZigBee.

ZIGBEE

ZigBee is a low power communications protocol that's been around for over a decade. Although it's not one you may have heard about, it's commonly used in smart electricity meters.

Like any home automation scenario, ZigBee is only limited by the developers of equipment and the people using it. There are some obvious applications such as adjusting thermostats during times when power prices are at the highest or automatically activating swimming pool pumps when prices are at their lowest.

Recently, the ZigBee Alliance – the body that manages ZigBee – published new specification covering the charging of electric vehicles and new control systems for TV and other home devices that offer better control than current remote controls.

ROLLING YOUR OWN – IFTTT

With HomeKit still in its infancy and vendors still playing their silly 'my ecosystem is the best' game, it can be challenging to link up different systems.

If This Then That, or IFTTT (www. ifttt.com), lets you either create your own automation recipes or borrow those published by other users.

The beauty of IFTTT is that it works with a massive number of different services as well as home automation.

When I leave home, turn off my WeMo Bulbs

For example, you can create an IFTTT recipe that grabs all of the tweets for a particular hashtag and writes them to a new note in Evernote. Or you can capture a list of what you listened to with Spotify and have it emailed to you each week – thus solving the "what was that song I listened to on Wednesday?" problem.

The beauty of IFTTT is how it connects services that weren't designed to be linked. For example, Fitbit activity trackers can monitor your sleep. It's possible, using IFTTT to have the lights turn on automatically when you wake up. As the Fitbit 'knows' when you're awake, it can communicate with smart lights from Philips. Or a similar recipe can be used to turn something on that's connected to a Belkin WeMo switch.

As the name suggests, IFTTT looks for some event to trigger another – if this happens, then do that.

Although we've been largely focusing on home automation, there are dozens of everyday tasks we carry out that could use some automation.

In your business, you can create an IFTTT recipe that captures every post and comment made to your company's Facebook page. This can be handy as there are times when Facebook makes it hard to find past posts because of the way its display algorithms work.

Or, if you're at a conference you can have all the tweets using the event hashtag added to a note in Evernote. Or you can have all your Facebook images automatically stored in Dropbox.

Before you can create recipes using IFTTT you need to add the channels you're going to connect. A channel is an application or service you plan to use in your recipe. For example, if you want to use IFTTT to turn the lights on with your WeMo system when you wake up, then you'll need to add the WeMo and Fitbit channels.

When you wake up in the morning, assuming your Fitbit is automatically logging your sleep, the light you've linked in the recipe will turn on.

If you have a device or service that collects or creates data you can use that to trigger some other event or action.

PLANNING A HOME AUTOMATION SET UP

With so many options on the market – how do you plan a home automation setup?

It's tempting to go all in and buy a bunch of gear and start automating everything, but our advice is to start small and add devices as you go. That way, you can tinker and refine each piece before adding too much complexity.

Have your final goal in mind, however, so you make smart decisions about what devices you choose to add.

Here's what we did.

Audit and plan. We started with an audit of what power and light we have. We also noted what devices we wanted to control, such as the entertainment system.

We live in a three-bedroom house with a main living area. The area between the bedrooms is almost the size of a small room and has its own power and light, creating a small foyer in the centre of the home.

Each bedroom has a central light fitting and double power outlet on the wall. One of the bedrooms is also a study and the main bedroom has a TV and small sound system.

The lounge room houses the entertainment system and there are two light fittings, each with a three-bulb fitting.

For lighting control, there are two options: smart switches and smart bulbs. Here, the question is almost entirely financial. If a smart bulb costs around $60 and a smart switch costs around $100,

then it makes sense to change the switch on multi-bulb fittings and the bulbs on single bulb fittings.

Assuming we're planning to make almost every light in the house smart, we had seven single-bulb fittings and two three-bulb fittings controlled from a single switch. We didn't bother with the garage and laundry.

So, with lighting, we're planning to ultimately change all seven single-bulbs to smart bulbs and the switch controlling the two three-bulb fittings to a smart switch.

There are two wall outlets that we particularly want to control: the entertainment centre in the lounge and the TV and audio in the master bedroom. Although there are many more outlets we could control, there seems little benefit for now. If things change, we can always add more control systems.

Choosing a platform. For us, given the nascent nature of consumer friendly home automation, there were two factors we were particularly focused on – support for HomeKit and support for IFTTT.

The neat thing about these is that you aren't limited to a single vendor. For example, you may like one company's switches, but another's bulbs. This makes it possible to mix and match the products that best suit you without having to compromise.

Of course, cost is an important consideration. By taking a 'whole house but one room at a time' approach, we're able to add pieces as we go, reducing the upfront cost without preventing us from supplementing the system in future.

Deployment. The majority of the systems we're seeing that either support or will

support HomeKit can be installed with limited expertise.

The one exception is the addition of any device that is wired in, such as a light switch. For this, you should engage a registered electrical contractor. But light bulbs and devices that plug into power outlets can be installed by almost anyone – just be careful if you need to climb a ladder to change a globe.

THE FINAL WORD: SECURITY

Part of what makes your home automation system useful is the ability for it to be controlled from your iPhone or iPad. But, as Spider-Man knows, with great power comes great responsibility.

When you start connecting devices in your home to the internet you increase what the experts call your 'threat surface' – the part of your network that can be potentially accessed by a suitably skilled and motivated party.

The rules for connected devices in the home – part of the so-called Internet of Things – are the same as for any other connected device.

- change all default passwords
- keep all firmware and software up to date
- where possible, carry out the initial setup disconnected from the internet
- ensure your iPhone and iPad are locked with a passcode, so your house stays safe even if your mobile device is stolen, and
- don't connect a device to your smart home network just for the sake of it – look for a concrete benefit such as convenience or cost saving so you don't increase your threat surface for no reason. ⊠

MAC GEMS NEW SOFTWARE FROM THE MAC APP STORE

TRIPMODE
UTILITY
TripMode
US$7.99

TOP PICK

Ever since it became possible to tether a computer to a cell modem, it's also been possible to blow through one's monthly or service-plan limit and either run out of mobile data, be throttled to a trickle or face expensive overuse fees. TripMode is the first easy-to-use OS X utility to help with that problem.

When installed, TripMode (tripmode.ch) appears in your system menu bar and monitors for network changes in Yosemite. Whenever you join a new Wi-Fi network or connect to a Personal Hotspot, TripMode activates and blocks all system-level and application network usage. The utility was built as an access whitelist, so all network usage is blocked until you allow it.

You can check boxes next to any activity you want to approve from TripMode's drop-down menu. As new services or software tries to access the network or the internet, more entries appear in the list. You may be surprised by what appears, as many apps regularly poll servers in the background to check for software updates or event updates. TripMode can't populate the list fully initially, because it only 'knows' that an app or service requires the internet when that occurs. The utility's icon turns red whenever an app that's blocked tries to access the network.

Individual software products have limited awareness of the network to which they're connected when you're on a Mac. The iOS operating system and iOS apps typically are more careful about letting you pick and choose what's sent over mobile and what's not. In OS X, Dropbox has a Pause button and CrashPlan lets you blacklist Wi-Fi networks by name. But OS X assumes it can always let apps use 100 percent of available throughput. Photos for OS X is an example of that.

TripMode turns on automatically for every new network or new Personal Hotspot mode (such as a USB connection), but you can override the setting and it remembers that override. For instance, connect via USB to your iPhone or iPad to use its Personal Hotspot, and TripMode activates. If you click its switch from On to Off, the next time you connect via USB, TripMode will remain off. It retains this information for every network you connect with, restoring whatever state you left it in when you last connected.

TripMode keeps track of data transferred while it's active, though not by network, just cumulatively. You can view data in the last session, the current day or the current month.

The software could do more. Allowing blacklisting rather than whitelisting, as well as creating groups and sets for different circumstances or for easier organisation, would be nice. I may want a 'polite Wi-Fi network user' set when I'm at a local café, 'mobile throttled' for typical Personal Hotspot use and 'Starbucks Trenta usage' for those mega-coffee outlets equipped with gigabit internet. Throttling apps could also be useful, though technically more difficult.

These are quibbles and ideas for improvement in future upgrades or as paid in-app additions. What TripMode does is nice at the price. TripMode can be used for seven days with its full functionality, after which point it throttles to allow only 15 minutes of use per day if a licence isn't purchased.

– BY GLENN FLEISHMAN
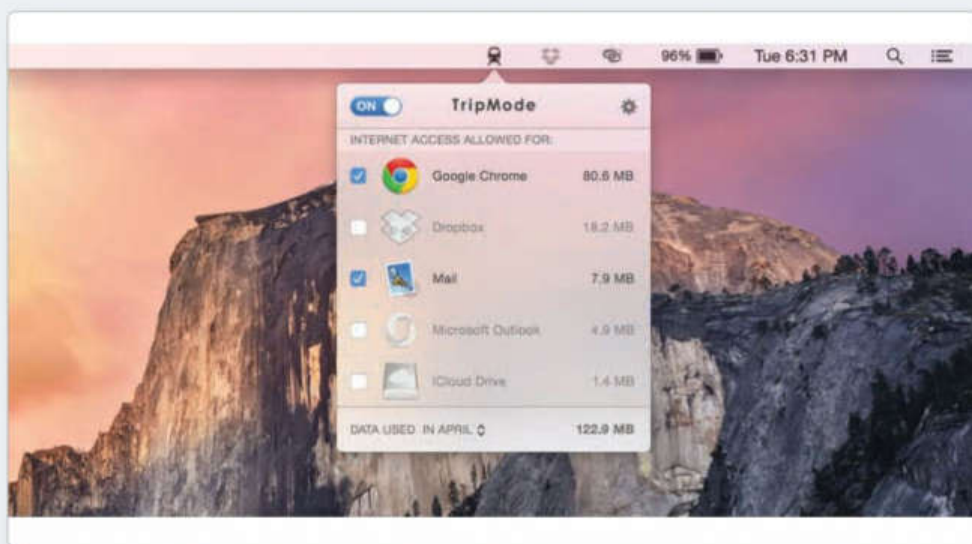
LEGO STAR WARS SAGA
GAME
Feral Interactive
$6.49

This is the definitive *LEGO Star Wars* comprising the first two games and expanding them with new characters, enhanced visuals and more bonus levels than you can shake a lightsaber at. It's family-friendly game, and lets you choose from over 160 characters to engage in combat, solve puzzles and work together as a team to defeat the dark side.

MICROSOFT REMOTE DESKTOP
BUSINESS
Microsoft
FREE

We may love our Macs, but Windows is still the top of the pops when it comes to which OS is most used. Microsoft Remote Desktop is an easy-to-use tool that lets you remotely control Windows systems running on your network. It's handy for support if you're running a screenless system for a specific task.

DAISYDISK
UTILITY
Software Ambience Corp
$12.99

Disk space – eventually we all find ourselves constrained. DaisyDisk searches through your disks using a visual interactive map, so you can easily remove unnecessary files with a simple drag and drop. Its fast and the integration with QuickLook makes it easy to preview file content before deciding on whether you're looking at trash or treasure.

MYTUNER RADIO FREE AUSTRALIA
MUSIC
Appgeneration Software
FREE

Contrary to expectations, when podcasts emerged, radio became stronger than ever. And with most stations now streaming their content via the internet, myTuner makes it easy to listen to broadcasts from over 120 countries from the comfort of your Mac. A menu bar icon makes it a snap to switch stations and find what you like from around the world.

LOGIC PRO X
MUSIC
Apple
$249.99

Apple's latest iteration of Logic Pro, version 10.2, brings the sample manipulation synthesiser Alchemy to Logic Pro X users for free. Alchemy makes it easy to find and explore new sounds while also providing sophisticated tools for sound designers. A 14GB content library offers thousands of new sounds including content for producers of hip-hop, EDM (electronic dance music) and a variety of underground and indie styles. Other extras include multiple synthesis engines and advanced morphing features, an enhanced keyboard browser for finding sounds quickly and performance controls to manipulate and craft new sounds. MainStage and Logic Remote have also been updated to support Logic Pro X 10.2 and Alchemy.

BUSINESS

WORD 2016

If Word is your primary tool for getting work done with words, run, don't walk, to upgrade to Word 2016.

It doesn't matter if you think Microsoft Word doesn't matter anymore. It does – for tens, hundreds, thousands of people, Microsoft Word is an everyday event. An indispensable tool for getting daily business done. And without it, whether you like it or not, much of what must get done in the world of words wouldn't, if it weren't for Word.

What matters most to those users is how it works: whether it works well. Whether it will get the job done without getting in the way. What matters to the hundreds of thousands of people who've traded up from a PC to a Mac and the tens of thousands of IT professionals who have to support them is whether or not Word on the Mac works in the world they work in. Is it invisible? Seamless? Unbroken?

With few exceptions, Word for Mac 2016 is exactly that.

As a word processing tool, Word 2016 hasn't changed much since its last major release as Word for Mac 2011. How you create, edit and style text remains the same as it ever was. What you may notice is that Word now supports some Mac OS-only features such as full-screen mode, multi-touch gestures and retina graphics.

Microsoft has also added some Mac-only features of its own, including a Smart Lookup feature that integrates Bing searches and other contextually relevant information from the web when you use the tool on selected text. All of the Office products also include something that Microsoft now refers to as the Task Pane, which is an awful lot like Office's old Floating Palettes, without the floating. In short, the Task Pane provides an easy way for you to make quick formatting changes to text and other document elements without having to rely on a menu or Ribbon element.

Over the past several years, Microsoft has undertaken a massive redesign of its Office products for Mac and iOS. These updates have streamlined the look and feel of Office apps, making them more like their Windows versions, but with what I find to be a far less cluttered look and feel. In fact, the new Mac version is as clean as Word on the iPad, which is an excellent app, and it also has some of the same limitations. The upside to this sameness is that, whether you're working on a PC at your office, on your iPad on the train or on your Mac at home, you'll find the tools you need in substantially the same places.

While there is an essential 'sameness' to all these apps, you will still find that some features found in the Windows version are nowhere to be found on the Mac. For example, the option to add a pop-up calendar to a table – a feature you'll find in the Windows version – isn't available on the Mac. But, if you use your Mac to add a properly formatted date to a document with a table including that feature, the field will retain the calendar option when you open it again on a PC.

This raises an important point: Word for Mac is top-notch when it comes to collaborative work. This is obvious when it comes to basic document editing. Email a document to someone, have them make changes, and send it back to you. If they're using the current version of Word on the device they edit with, the transition is seamless. But, better yet, share your document using OneDrive (onedrive.live.com), OneDrive for Business or a Microsoft Sharepoint, and you can have dozens of people working on the same document at the same time, each without interfering with the other's changes. Word's collaborative tools also include threaded comments, so you can see and interact with others within the comments on a document.

Word 2016 isn't without disappointments, but they are by no means deal killers. Word takes no advantage of Apple's Autosave and Versions features. So you're stuck with what now seems like a vestige of some ancient past. Have a power failure? Dog step on your power strip? You're relegated to the weeping and gnashing of teeth you no longer expect when bad things happen and you have unsaved changes in a document. This also seems to be tied to Word's collaboration features, which, while excellent, are not as dynamic as I'd like them to be. If you're editing a document while someone else is also making changes, you don't see their changes until both they and you save the document. (Compare this with Pages, which updates changes almost as soon as they're made, no matter who is editing the document.) Finally, Word doesn't support Yosemite's option to rename and/or move a document using the menu in the document's title bar.

Bottom line. Microsoft Word 2016 is an excellent update to what is, for most users, an important business tool. Changes to the program's user interface make it easy for anyone to bounce from Word on a Mac to Word on any other platform with a minimal transitional curve. Word's collaboration features make it possible for business users to work on the computing platform of their choosing without making significant sacrifices.

While the program doesn't support some of Yosemite's more important, user-friendly and bacon-saving features – such as Autosave – the overall user experience is superb. In short, Microsoft Word gets the job done without getting in the way. If Word is your primary tool for getting work done with words, run, don't walk, to upgrade to Word 2016.

POWERPOINT 2016 FOR MAC

Whether you should use PowerPoint instead of Keynote depends on the features you need.

BY JOE KISSELL

As I use PowerPoint 2016 for Mac, the word that keeps popping into my head is 'pleasant'. Nearly everything about the massive visual overhaul from PowerPoint 2011 for Mac seems clearer, friendlier and more modern. It feels more like Apple's Keynote, which I mean as a compliment.

The feature changes are mostly minor and subtle yet useful. Even so, PowerPoint 2016 for Mac still lags behind its Windows counterpart – and it has also lost a few interesting features that were present in PowerPoint 2011.

NEW AND IMPROVED

The most obvious change is a nicely redesigned ribbon, which is now nearly identical to the ones in PowerPoint for Windows and PowerPoint Online. If you knew where everything was in PowerPoint 2011, prepare for a bit of relearning. Almost every ribbon control is still there, but many have been moved, renamed and given new icons. The erstwhile Themes tab is now called Design; Tables, Charts and SmartArt (among other features) have been subsumed under a new Insert tab, and a number of tabs (such as Picture Format and Table Design) appear only when the appropriate object type is selected.

The entire toolbar is gone, with only four vestigial icons (for File, Save, Undo and Repeat) next to the Close, Minimise and Zoom controls. Although most toolbar icons have been relocated onto one of the ribbon tabs (and also have corresponding menu commands), you can no longer create a customised set of icons for your most common tasks.

A new sidebar (much like Keynote's Inspector) appears on the right side of the window when you invoke certain features, such as the Animation pane (which lists all the animations on your slide), the Format Pane (for editing the attributes of shapes, graphics and other objects – including previously hard-to-reach settings such as 3D Format and 3D Rotation) and Comments. Each pane gets its own tab, and you can tear off any tab to make it a floating palette. I like the way this context-sensitive interface consolidation (along with the streamlined ribbon) reduces screen clutter.

When you open PowerPoint 2016, you're presented with 24 brand new themes. Although that's less than half the number of themes in PowerPoint 2011, there's a new twist: each theme has numerous variants. With one click, you can select a different combination of colour palettes, fonts and background styles for your current theme (but with the same overall design) or you can apply those attributes individually. Although the theme chooser displays no templates

(basically fill-in-the-blanks presentations, each with its own theme), you can type a keyword in the Search All Templates field at the top to display matching templates, which you can then download with two clicks.

Another noteworthy improvement is better integration with OneDrive and Office 365. Presentations are now saved to your OneDrive by default, and if you want to use OneDrive for storing and syncing your data, it couldn't be easier. Unfortunately, unlike PowerPoint for iOS, the Mac version doesn't have native support for Dropbox, iCloud Drive or other cloud storage services (although you can manually save a file to any folder on your Mac, including Dropbox and iCloud Drive). Sharing presentations (with or without editing privileges) is much simpler now too, and even someone without a copy of PowerPoint can view and edit your shared presentation in PowerPoint Online. And people collaborating on a presentation will appreciate the new threaded comments feature.

Other minor new features include a more flexible presenter view, better conflict resolution (for when multiple people make changes to a slide at the same time) and a dozen or so new transitions (matching those in the Windows version).
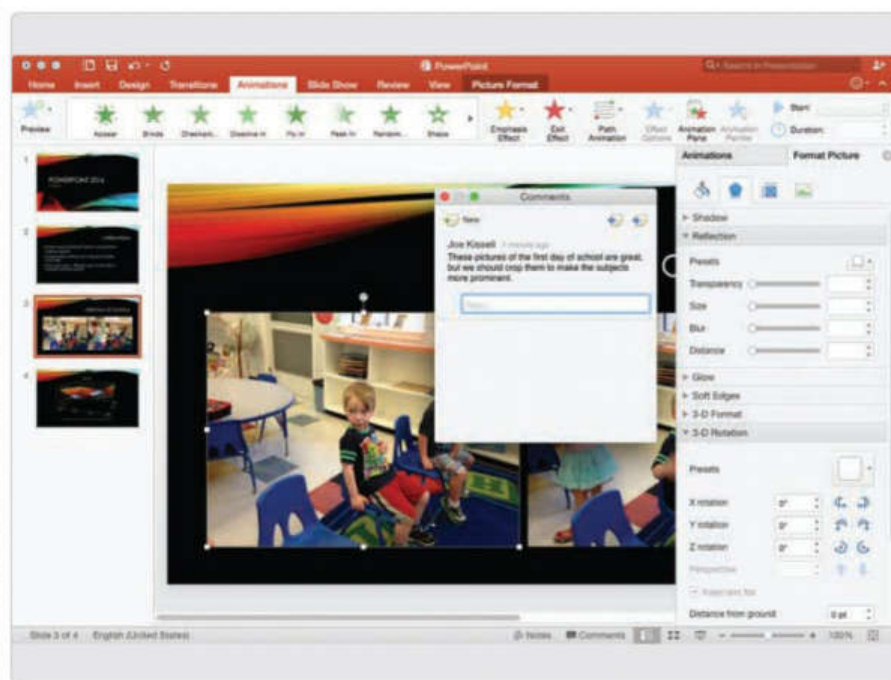
GONE BUT NOT FORGOTTEN

A number of features have disappeared, too. The Help mentions only one of these: you can no longer save a presentation as a movie (you can work around this by using screen-recording software such as ScreenFlow; go.macworld.com/screenflow). In addition, you can no longer save your presentation as a series of images, broadcast your slides live using the PowerPoint Broadcast Service, compare two versions of a presentation or use the Scrapbook to store and reuse text and graphics snippets.

Macworld's review of PowerPoint 2011 (go.macworld.com/ppt2011) lamented the absence of features found in the Windows version, such as the capability to adjust the starting and ending points of movies, sounds that play in the background across slides, and an advanced timeline for editing a slide's animations in a graphical format. Those features are still absent in PowerPoint 2016 for Mac. Other

Windows-only features are embedding YouTube videos; trimming, bookmarking and fading audio; customisable keyboard shortcuts; animation triggers (animating an object when you click it); inserting online pictures from within PowerPoint; and embedding fonts in your presentation (for proper display on computers without the same fonts).

Bottom line. For Mac users, the more apt question is how PowerPoint stacks up against Apple's free Keynote app. When I reviewed Keynote 6.0, I complained about features that had been lost in its most recent overhaul. Since then (it's now up to version 6.5.3), some of those features have been restored, and its reliability has improved. I now consider the two apps equivalent in usability, overall power and likability.

However, each has features the other lacks, so your choice will depend on which features are most important to you (and which ecosystem – OneDrive/Office

365 or iCloud/iWork – you feel most comfortable in). For example, PowerPoint has nothing like Keynote's signature Magic Move transition, its tables lack Keynote's extensive spreadsheet capabilities, and Keynote (still) lets you trim audio and video and save your presentation as a movie or series of graphics.

On the other hand, PowerPoint offers easier and more flexible path animation, the fabulously useful Arrange Reorder Overlapping Objects command (for a 3D view of all the objects on a slide) and the option to play presentations in a separate window (which is especially useful when giving remote presentations using an app such as Skype).

PowerPoint 2016 for Mac is, as I say, pleasant to use, not to mention powerful. If it had feature parity with the Windows version, support for Dropbox and iCloud, and a Magic Move-like transition, it would be nearly perfect – and I'd love to see that happen. ⌨

APPLE ACCOUNTS STOLEN VIA JAILBREAK APP

BY JEREMY KIRK

Credentials for more than 225,000 Apple accounts have been stolen by sophisticated malware that targets modified iOS devices, according to Palo Alto Networks.

The malware, which is nicknamed KeyRaider, enables attackers to download applications from Apple's App Store without paying or to lock devices in lieu of a ransom.

"We believe this to be the largest known Apple account theft caused by malware," wrote Claud Xiao of Palo Alto Networks in a blog post (http://researchcenter. paloaltonetworks.com/2015/08/keyraider-ios-malware-steals-over-225000-apple-accounts-to-create-free-app-utopia).

Palo Alto Networks notified Apple of KeyRaider on 26 August and provided the stolen account information, Xiao wrote. Apple officials in Sydney couldn't be immediately reached at the time.

KeyRaider can only infect those who have 'jailbroken' their Apple device. Jailbreaking removes Apple's protections that limit what apps can be installed on a device. Apple advises against jailbreaking for security reasons.

Palo Alto Networks investigated KeyRaider with an amateur technical group in China called WeipTech. A member of that group, who is a student at Yangzhou University, discovered the attack, Xiou wrote.

KeyRaider has been spread by being incorporated into jailbreak tweaks, or software packages that allow for some new function to be run on iOS. The malware has been found within tweaks published on the WeiPhone forum for jailbroken phones.

It is suspected that a user, who goes by the username 'mischa07' on WeiPhone, may be responsible for seeding KeyRaider to his personal repository of apps. The

same user name was hardcoded into KeyRaider as the encryption and decryption key for the malware, Xiao wrote.

An analysis of mischa07's repository shows the user has uploaded many tweaks to WeiPhone, including ones that allow users to cheat on games, tune their systems and strip advertisements from apps.

KeyRaider taps into system processes within Cydia, which is the application used for downloading apps for jailbroken phones. It steals Apple account usernames, passwords and a device's GUID (globally unique identifier) by intercepting iTunes traffic, which it can then use to fraudulently download apps. The malware also collects certificates, private keys and purchase receipts.

In another style of attack, KeyRaider was used for at least one ransom ware attempt. The malware can "locally disable any kind of unlocking operations, whether [or not] the correct passcode or password has been entered," Xiao wrote.

One person reported their phone was locked and showed a message to contact someone over the QQ instant messaging service.

The stolen account information was found by WeipTech on a command-and-control server that communicates with KeyRaider-infected phones. That server had security vulnerabilities that allowed the group to obtain the stolen data. But KeyRaider's authors figured out something was going on.

WeipTech (www.weiptech.org) only recovered about half of the stolen accounts "before the attacker fixed the vulnerability," Xiao wrote.

WeipTech was set up as a service for people to see if their account was among those compromised. 🔲

SALESFORCE SHOWCASES APPLE WATCH APPS FOR BUSINESSES

KATHERINE NOYES

Salesforce has long been a proponent of wearable computing's enterprise potential, and recently it showed off five new Apple Watch apps created specifically for business users.

All built by the company's partners on the Salesforce1 Platform using the Salesforce Wear toolkit, the new apps span a spectrum of purposes, including collaboration, scheduling and project management.

BetterWorks Wear, for instance, is designed to help companies connect employees around common goals. A retailer, for example, could equip Apple Watch-wearing sales associates with the app to ensure they're always updated on progress toward team and individual sales goals.

The ContactWorld for Wearables app from NewVoiceMedia, meanwhile, integrates caller ID with Salesforce data to give sales and service reps new visibility into who is calling and the value that

customer represents to the organisation. Armed with that information, they can decide how to prioritise the call.

ClickSoftware's FieldExpert app, on the other hand, provides mobile scheduling for workforces that are often away from the office. The app aims to help mobile employees review their daily schedule, update service requests and schedule additional services or upgrades right from the Apple Watch. A cable technician, for instance, could automatically notify a customer when they will be arriving.

The TaskRay app by Bracket Labs is designed to help project managers keep tabs on a project's status via 'at-a-glance' completion gauges. A Dictation features allows users to speak their updates into the watch, converting the voice memo into text and automatically syncing it into Salesforce.

Finally, Vlocity's Wear app for Communications and Media connects to Salesforce's Sales Cloud and Service Cloud, so as to provide representatives with customer profile data. With that information in hand, they can initiate tasks directly from the app, such as updating a case, sending a bill or creating a new order.

In August, Salesforce said it has a total of 20 new Apple Watch apps to unveil, but it didn't provide details on the other 15 other than to mention the partners behind them: Alpine Metrics, Apttus, BrainHeart, Fairsail, FinancialForce.com, Footprints, HeyWire, InsideSales, Point of Reference, Proximity Insight, Remedyforce, Sage, ServiceMax, Skedulo and TeamSpirit.

There were also no details provided about the new apps' pricing or availability.

Saying goodbye to a beloved 2008 MacBook Pro

Christopher Phin loved his MacBook Pro so much that he kept it alive for seven years with various mods and hardware upgrades. But all good things must come to an end, eventually.

When someone retires, it's customary to give a glowing speech that praises their long service and contributions. Well, I've just retired my 2008 MacBook Pro, and I'd like to do the same.

This machine was – and is – a rock, completely solid and completely reliable. (It also feels like you're carrying a rock, by modern standards.) It has lasted me for seven years and, frankly, it's still going strong. 'Apple tax', schmapple tax. The decision to retire it wasn't made because of one big reason – it hasn't stopped working (though it's beginning to fray at the edges a little) and it hasn't become too slow (though I was occasionally becoming frustrated with export times as I do more work in Final Cut Pro). It's just time to treat myself to something that will make my working life just a little more pleasant.

There are three reasons it's survived and thrived through seven unremitting years of hard work. The first is how it's built and the materials from which it's built. Take the trackpad, for example. On laptops I've had before, after a few months of heavy use, I'd start to wear a bald spot in the trackpad, which would gradually become inconsistently responsive. This one, though, was glass, and it looks and feels as perfect under my fingertips as it did on the day I excitedly lifted it from its box in 2008.

I will allow, though, that the trackpad no longer always registers clicks – yay, tap to click – and that the black plastic material on the hinge is starting to crackle and flake. (Note that both problems are in the two areas that physically move.)

These slight evidences of the hard life it's led aside, however, at a glance you wouldn't think this machine is old.

By technology standards though – especially the standards of someone who writes about and makes his living from the field – it most decidedly is. It doesn't look dated to any but the most attentive eye; a charitable interpretation is that Apple nailed the simple, distilled-down design language a long time ago, though alternatively you could argue it also suggests its design language has stagnated. The screen is still bright and the sturdy aluminium chassis doesn't show physical signs of ageing. The only really obvious sign that it's been a writer's main Mac for seven years is how shiny some of the key caps have become.

But while outwardly little has changed since it was new, the same isn't true inside, which is the second reason it has been pressed into service for so long. First, the hard disk was swapped for a 256GB SSD

from Crucial (transformative, as you'll know if you've done a similar thing), then the optical drive was swapped for a second internal drive using a kit from OWC and a 500GB hard disk donated by a friend of mine. Then, as the battery wore out, it too was replaced. And, finally, once SSD prices dropped significantly, the main SSD got switched again, this time for a 500GB MX100 from Crucial.

It's natural, of course, to draw the obvious comparisons with the current crop of Macs – especially the popular laptops – which are in essence sealed boxes, and to tut, don a tinfoil hat and say that Apple is screwing us by not letting us give our machines the kind of longevity that only upgrading makes possible. I'm not so sure it's relevant, though. For one thing, I suspect many people criticising the perceived high cost of having Apple replace the battery in a modern laptop not only conveniently overlook the benefits of a non-removable battery, but also crucially have forgotten that the old removable batteries themselves cost only a little less than this service.

More importantly, though, I think we've probably reached a point where a midlevel computer will suffice for most people for a long time, unchanged, thanks in large part to the vast difference flash storage makes to a computer's apparent speed and responsiveness. In the past, you had to keep replacing your Mac regularly because the things we wanted computers to do outstripped their ability to do them.

There's a danger that this kind of talk will come back and bite me like the (probably apocryphal) Bill Gates quote about 640KB of RAM being enough for anybody, but I think there's a qualitative difference with this situation, and it's this... For the whole of the life of the modern, GUI/WIMP computer – though I'm simplifying dramatically here – we've essentially been asking computers to do the same class of things, and the basic

underlying change in hardware since the early days has just been making storage, CPUs, busses and so on incrementally faster. Now, though, while the fundamental job we ask computers to do hasn't changed – the paradigm remains the same – their hardware has come to the point where they can do it without breaking a sweat. Yes, rendering a video may take a while, but the elementary interface stuff of drawing windows and interacting with files no longer has a noticeable overhead.

In other words, until the fundamental role of computers changes – VR? Wetware? Quantum? – the combination of high-enough clock speeds and, crucially, very fast storage perhaps means that there's enough headroom now. Perhaps the traditionally prized ability to upgrade components is becoming less of a necessity if what you're trying to do is keep a computer running and relevant for years.

Which brings me to the third reason: my beloved MacBook Pro is running Yosemite, will run El Capitan and may run further versions of OS X beyond that. There's no Handoff and no AirDrop to and from iOS, but in every important way, it's a completely modern Mac experience. That too, I think, is made possible by how mature and settled OS X has become; Apple can add features and change stuff under the hood, but because the basic business of 'being an operating system' hasn't fundamentally changed at the same time as hardware has become much more capable, even seven-year-old hardware is still easily capable of running the latest one.

So raise a glass, ladies and gentlemen, to my 2008 MacBook Pro – doughty companion, colleague and friend for seven years. It doesn't look a day older than when we first met, and it worked tirelessly until this, its very last day in the office. It deserves a happy, peaceful and rewarding retirement, and I'm sure you'll join me in wishing it the very best. To Chris' old Mac! 🖱

GEAR
GIZMOS
GOODIES

GADGETGUIDE

Logitech Blok

Have you ever looked at your iPad and wondered what it would look like with a keyboard setup similar to Microsoft's Surface Pro 3? Neither have I, but here's the answer: Logitech's Blok Keyboard Case.

The Blok is part keyboard, part protective case. The keyboard offers Logitech's typical keyboard responsiveness and layout, while the case offers a box design aimed at protecting your iPad from drops of up to two metres.

Almost all of the keyboards I've tested for the iPad offer some sort of channel for the tablet to rest in. The Blok, however, offers a stand-alone keyboard that attaches to a stand-alone case via a magnetic hinge. In order to hold the iPad up, Logitech includes a kickstand on the back of the case. It offers viewing angles ranging from 20 to 70 degrees, whether or not the keyboard is attached to the case.

The kickstand held its position even after accidental bumps or over extended periods of time. I enjoyed propping up my iPad to watch a movie without having a distracting keyboard sitting in front of it.

Logitech decided to forgo including a rechargeable battery altogether – a battery that usually netted a year's worth of battery life according to the company. Instead, the company is now using two CR2032 batteries. I wasn't able to fully test the estimated four-year battery life of the Blok Keyboard, and I'll probably never have to.

The keyboard itself uses the typical layout of most iPad keyboards. The top row is made up of shortcut keys to common iOS actions such as activating Siri, media

controls and a lock button. Just below it sits a traditional keyboard layout, with numerical and character keys of ample size.

The keys are responsive and somewhat forgiving. Actually, I'd put this keyboard in the same category as Logitech's Ultrathin keyboard – it's one of the best iPad keyboards available.

I was able to power on the keyboard and begin typing just after connecting it to my iPad. Furthermore, I enjoyed not being forced to leave the keyboard attached to its counterpart. I do wish the keyboard offered backlit keys, however.

There's no getting around the fact the case is pretty ugly. It's akin to a slab of wood a butcher would cut meat on. It's rather large and heavy, adding nearly 680g in weight, and 2.5cm of thickness to your iPad when the case and keyboard are present.

Logitech offers three different colour combinations of the case: black, blue and teal, or red and violet. The latter two provide some much needed appeal to the boring black case.

At the end of the day, the Blok's keyboard design is one that's a pleasure to use. I'm not sold on the bulkiness of the Blok case, but I do wish Logitech would bring the keyboard's battery setup to something smaller and lighter. A battery-powered keyboard with enough juice to get me through multiple iPad upgrade cycles? I'm in.

Logitech / $149.95 / www.logitech.com

– BY JASON CIPRIANI

Mophie H2pro

Not all of us use our iPhones from the safety of dry land or an office. The Mophie H20PRO is 100 percent waterproof with military standard durability and the integrated 2750mAh rechargeable lithium-ion polymer delivers an extra 100 percent of battery life to your iPhone so you can stay connected when you're out and about.

Mophie
US$129.95
www.mophie.com

Moshi Urbana

Notebook bags used to be very boring and utilitarian. But that's changed in recent years and Moshi is getting in on the act. The computer bags in its Urbana range are stylish and functional. Comprising two designs, the range includes the Urbana Mini for smaller devices and the Urbana Briefcase suited for notebooks up to 15in in size.

Moshi
from $149.99
www.moshi.com

Reserve Strap

The Reserve Strap for Apple Watch looks chic and stylish, but contains a battery in the strap that gives an additional 30 hours of Apple Watch use. When it does need some extra juice, you can recharge it via a Micro USB. Plus, the thermoset elastomer silicone band has the same level of water resistance as the Apple Watch itself – consider it like a Sport band, but kicked up a notch.

Reserve Strap
US$250
reservestrap.com

Spire

The wearables market is essentially made up of devices that count your steps, assess your activity or let you know when you're not moving enough. All of these devices track movement, but they don't track your breathing. Spire is a small device that you clip onto your belt or bra, and it detects your inhalations and exhalations. This data gets sent to your iOS device, which provides insights into how you inspire. Spire is a unique tool for monitoring one part of your health that other wearables ignore. By monitoring your breathing, Spire can help you better manage your stress levels.

Spire
US$149.95
www.spire.io

Velvetwire Powerline

Velvetwire was founded by a husband and wife team, who learned how crucial it was to have power adapters that didn't drain the boat's battery while on an around-the-world sailing trip. They make the Powerslayer line of chargers, as well as nautically inspired $30 Powerline Lightning cables. The cables are nice and thick and the braided jacketing makes them easy to coil.

Velvetwire / from US$20 / velvetwire.com

EL CAPITAN DEEP DIVE

BY JASON SNELL
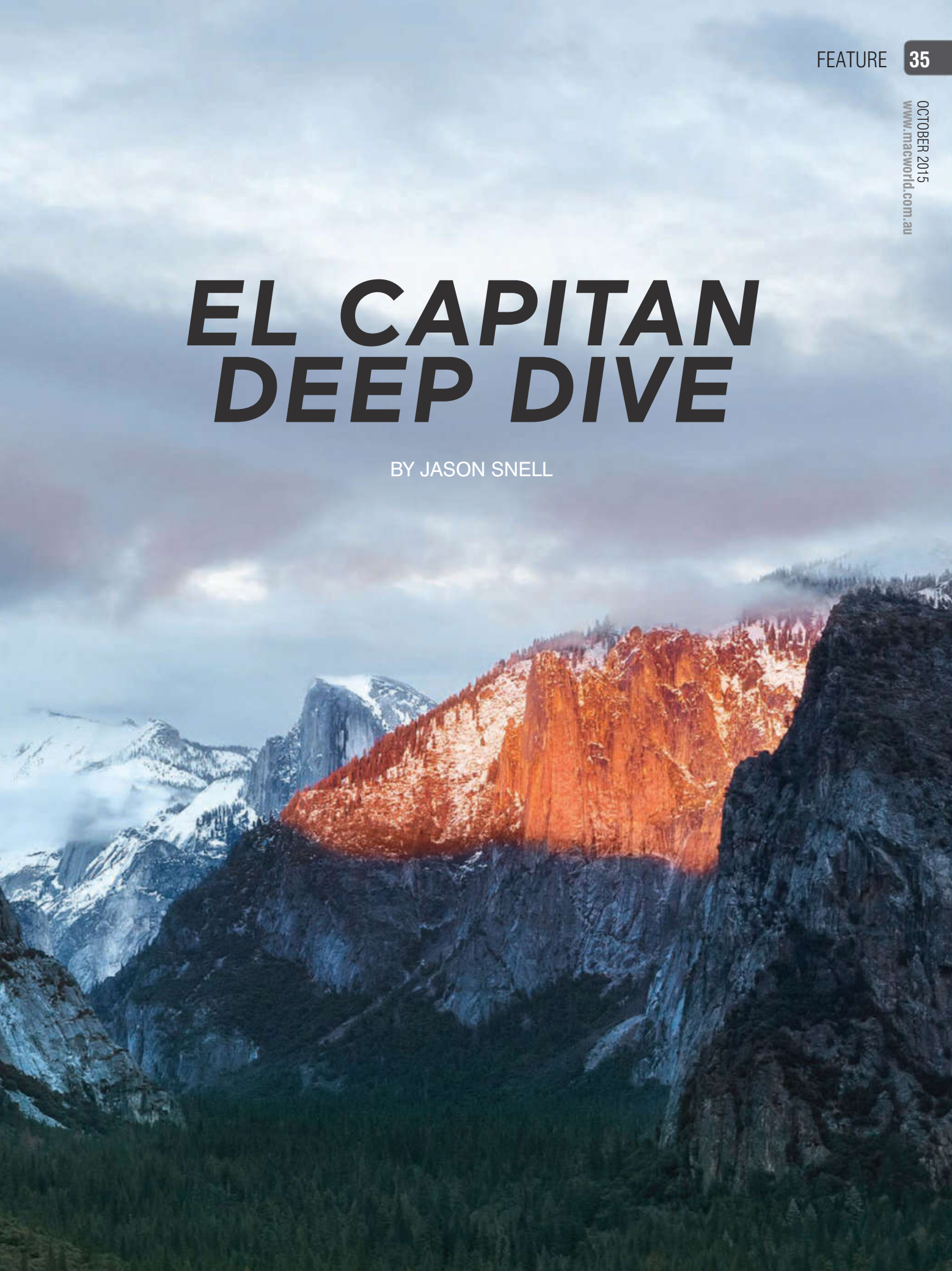
Apple announced OS X 10.11 El Capitan at its annual Worldwide Developers Conference, due to ship in the spring, but with a public beta release that is out now. If you're just too excited about El Capitan to wait for spring, your chance to try out the next generation of OS X is here: Apple is releasing the first El Capitan beta to users who have joined its public beta program.

Here's our look at what to expect, keeping in mind that El Capitan is still a work in progress and a lot can (and will) change between now and the release of the full, finished version in the spring.

MAIL GETS MORE EFFICIENT

When an OS X update arrives, it's also time for the annual upgrade to the Apple-built apps that are included with OS X. With El Capitan, Apple Mail is getting a big update.

Some of the changes are cosmetic in nature. Taking a cue from iOS and from some third-party competitors, Mail now allows you to use the trackpad to swipe messages into the trash or to mark them as unread. Trackpad-oriented users will appreciate the shortcut, though I found myself wishing for a few more options such as being able to swipe to archive a message rather than delete it, or to swipe to flag a message.

For quite some time now, OS X has had the ability to detect certain kinds of content in your email messages – names of contacts, events, dates and times. In El Capitan, Mail does a much better job of putting that information in context. If a potential event is mentioned in the text of an email message – 'let's have lunch on Thursday' – Mail will add a banner above the top of the message body that displays the event and provides an Add Event link to quickly add it to your calendar. Likewise, if the person mailing you doesn't appear in your Contacts list, Mail will display a banner indicating that it's detected a possible new contact with a quick Add Contact link.

But perhaps the best feature in Mail is one that lives under the hood and addresses a long-standing problem with the app. Perhaps because it was developed at Apple's campus, replete with high-speed internet connections, Mail has had a major blind spot: poor performance on slow connections. Have you tried using Mail on a slow, high-latency internet connection on, say, an aeroplane? All you want to do is check your Inbox, and Mail's trying to sync all your IMAP mailboxes rather than getting to the good stuff.

In El Capitan, Mail prioritises showing you new mail in your Inbox and prioritises the downloading of the messages or mailboxes that you're currently viewing. It's an improvement that's been a long time coming.

MISSION CONTROL AND SPLIT-SCREEN VIEW

Only Apple knows for sure, but it seems that Mission Control is used largely by power users and not your average everyday Mac user. Still, new ways of moving and displaying windows find their way into every OS X release, so clearly someone at Apple still loves them. In El Capitan, Mission Control's been revamped, with every window getting its own thumbnail – previously all windows from an App would be stacked together. All thumbnails are distributed while keeping geography in mind, so a window that's in the bottom left corner of the screen would have its thumbnail appear in the bottom left corner of the Mission Control view.

El Capitan's major new feature in this category, though, is the split-screen interface. This feature echoes the new split-screen app view in iOS 9, and it adds an extra dimension of utility to full-screen view. If you've got a large monitor, full-screen view is often overkill, because few apps really need to take up the entire screen. With El Capitan, you've got the option of having two different apps share full-screen view.

Entering split-screen view is actually fun, and quite clever on Apple's part. If you click and hold on the green plus/maximise button in a window's title bar, you'll be prompted to choose which side of the screen you'd like that window to be placed on. Then Mission Control will display on the other side of the screen, letting you choose a currently open window to use as the first window's split-screen buddy. It's fast, cool-looking and efficient.

Converting full-screen mode to split-screen mode isn't without its interface quirks. I noticed that, depending on how an app presents itself in full-screen mode, sometimes it could be very hard to tell which app was active/frontmost. That sometimes led to unexpected behaviour; for example, I tried to zoom in on a PDF in Preview by spreading my thumb and index finger on the trackpad, but it didn't work because I hadn't clicked on the window to activate Preview yet.

Since it seems that split-screen view is just a modified version of the old full-screen view, there are probably going to be some quirks like this – with apps assuming they're the only app you can see because you're in full-screen mode, even though they're not – until apps get modified to adapt to the El Capitan world.

(Speaking of apps getting full-screen/split-screen updates, Mail is a good example of this. In El Capitan it's got several new full-screen features, including the ability to minimise composition windows and even add multiple composition windows in a tabbed interface.)

A SMARTER SPOTLIGHT
Between Siri and Spotlight, Apple continues to build up its collection of searchable data sources, making one wonder when Siri and Spotlight will stop being tools that use search engines and start being search engines themselves. With El Capitan, Spotlight now has access to weather, stocks, sports, transit and web video, as well as support for natural-language queries.

Yes, this means you should be able to type Carlton standings into Spotlight and immediately be given the bad news from the AFL, or Coober Pedy weather and get the bad news from the blistering hot desert. It also means you can type queries like 'PDFs from June 2013' and actually get the result you're expecting.

I like this approach, because the fact is that many people search using natural-language queries, regardless of whether their search engine of choice supports it. A lot of us want to type 'how do I delete my Facebook account' into Google, rather than carefully crafting a string of search terms. So Spotlight gets smarter, we get to be lazier, and it should all work out.

With Yosemite, the Spotlight window itself came unglued from the Spotlight icon in the top right corner of the menu bar, and floated in the middle of the screen. In El Capitan, you can actually move the Spotlight box anywhere you want, and resize the results window.

UPGRADED NOTES
To paraphrase Yogi Berra, nobody likes the Notes app – it's too popular. The App Store is full of apps that outdo Notes at the job of taking notes, creating shopping lists, you name it. But Notes has one major thing going for it – it's on every Mac and iPhone and iPad in existence. That's why so many of us (and I'm including myself in this) use it.

So if Notes is popular, why not give it an upgrade? That's what Apple has done in El Capitan. Now you can stick a whole bunch of different files – PDFs, images, even videos – into a note. Notes is also now an option in the Share button, so you can send data to Notes from any app that displays a share sheet.

To create a checklist in Notes, you just select some text and click the Checklist button in the toolbar. That's it – every line gets a little checkbox in front of it, and you can check them on and off at will. The checkboxes aren't connected to anything, and clicking them doesn't do anything except check and uncheck them. But if you're making a quick to-do list, maybe that's all they need to do.

Up to now, Notes was one of the rare Apple cloud-connected apps on OS X that didn't actually use the iCloud infrastructure. Instead, it connected to a special IMAP mailbox in one of your connected email accounts. (If you've ever searched your Gmail and seen a dozen different notes files in your results, this is why.) But starting with El Capitan, Notes can also use iCloud proper. In fact, for some of the more advanced features – including checklists – you'll need to use iCloud. Fortunately, you can easily drag all your old notes from your email account right into iCloud, and they'll transfer over.

SAFARI TWEAKS
With El Capitan comes a new version of Safari, version 9, and it's got some clever new features. I have to admit that I still use bookmarks (and don't use RSS), and I'm looking forward to using the new Pinned Sites feature in Safari 9. Pinned Sites are like mega-bookmarks, or a simpler, more visual version of the Favorites Bar. Drag a tab into the left corner of Safari's title bar and it will stay there permanently, with a little icon (or letter if the site in question hasn't built a special custom icon for use with Pinned Sites) to distinguish it.

Pinned Sites are kept refreshed, so with one click you can see what's new on your favourite site. Clicks that lead to other pages on the site are loaded in the pinned site's tab, but external links all open in separate tabs, keeping your pinned site right where it is. As someone who likes to

bookmark a few very-favourite sites and visit them regularly, this has the makings of a cool feature.

Nobody likes blaring audio from pages that automatically play videos when the page loads, and if you're someone who likes to open articles in multiple tabs, you can very quickly have several different videos playing in different tabs. In Safari 9, you can very quickly mute audio in all of your tabs, and can also click to inspect which tab is making the noise, so you can jump to it and mute just that tab. This is a really great feature that I look forward to using when I'm browsing ESPN, *Macworld* and many of my other favourite sites, which I generally read only for the articles.

I also like the fact that Safari Reader, which gives you a simplified view of a complicated page layout, has added more display preferences. In the Yosemite version of Safari, you can make the text larger or smaller, but that's about it. In Safari 9, you can not only adjust text size, but also choose from four colour themes and eight typefaces. It's a good look.

FIRST SET OF PHOTOS IMPROVEMENTS

The first version of Photos for Mac is not without its power features, but while I was working on my book about Photos, I started to compile a list of the most requested 'missing features' in Photos 1.0.

I had hoped those features would be added by Apple in a future update, and I'm happy to report that this seems to be happening with the version of

Photos that will ship with El Capitan. The biggest addition is editing of image data, individually and in batches. In Photos you'll be able to add location information to a single photo or an entire batch, batch-organise faces, and batch-change titles.

Another huge user complaint was about a lack of flexibility in sorting albums. (The first version of Photos let you sort them any way you want, as long as it was by date.) The new version of Photos will let you sort them by date, title and more.

Photos will support image-editing extensions written by third-party developers. If there's a particular editing effect or tool that isn't available in Photos, a developer can write an extension that provides that feature, and it can be accessed from within Photos. I wasn't able to test this feature out because, unsurprisingly, I don't currently have access to any of those extensions.

GRAB BAG

Of course there's more. Though I haven't been able to test the claims – and beta versions, even public ones, are not usually ideal for speed testing – Apple claims that in El Capitan, apps launch up to 40 percent faster, switching between apps takes half the time, and opening PDFs is up to four times faster. A lot of speed boosts in El Capitan are due to Apple's adoption of Metal, the high-speed graphics technology that came to iOS last year. Apple itself is using Metal for its key graphics technologies, including CoreAnimation and CoreGraphics, so this isn't a case where Apple's tossing out a

shaky new technology and hoping that third-party developers work out the bugs. As the saying goes, Apple's eating its own dog food on this one.

Other new features in El Capitan include transit support in Maps – though it's limited to even fewer cities in the beta version than the relatively small number of cities due when El Capitan ships this spring. Clicking the Transit tab when you're in an unsupported city displays a banner that informs you there's no transit data for that city. (Maybe the Transit tab could fade out when no data is available?)

Using tomorrow's OS X today is an exciting prospect! But even a public beta is still a beta. That means that some features won't be fully functional and there will be bugs. I highly recommend that you don't install the El Capitan Public Beta on a system that you haven't backed up. If it's the only Mac you've got in order to get your work done, think twice. Consider installing it on an external drive or separate partition, or be prepared to restore to an older version of OS X in case of disaster or (more likely) software incompatibility.

Still, El Capitan feels pretty good to me. I love the audio-muting features of Safari and can't wait to use some slow in-flight Wi-Fi just so I can test out the new features of Apple Mail. And the speed boosts and support for Metal should improve everyone's Mac experience by making everything just a little bit faster. Isn't that what upgrades should be about? ▨

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APP GUIDE Cool software for the iOS & Apple Watch.

TRIPIT
TRAVEL
Concur
iPAD, iPHONE & APPLE WATCH FREE (IN-APP PURCHASES)

TOP PICK

As a frequent traveller, keeping track of flights, accommodation bookings, car hire and meetings can get tricky. TripIt makes all of this much easier. The app is backed by a cloud service that can extract travel and accommodation information from itineraries and present it in an easy to use form.

To use the app, you need to register with TripIt. You can create an account or leverage your existing Google, Facebook or Yahoo! account. Once that's done, you can access your travel plans from just about any device.

Adding travel plans is a snap. You can either enter them manually or simply forward your travel plans to plans@tripit.com from your registered email address. If you're really lazy, you can even give TripIt permission to check your email to find the itineraries for you. Although that works, we prefer not to give third parties direct access to our email.

While TripIt is a handy repository for that information, a big part of its value comes from its ability to share information. For example, we have added family to the list of viewers for our travel plans. That way, if they install TripIt, they can easily look at our travel plans. You can also subscribe to your TripIt calendar, so that your travel appears in your schedule.

With online check-in now an expected feature for travellers, TripIt has integrated this into the app. When check-in for a flight is available, you simply tap a button on the flight information screen and follow the airline's process. This includes sending boarding passes to Passbook.

We've stumped up the $61.99 subscription fee for TripIt Pro (available as an in-app purchase), as we use the app so much. This has been invaluable as it delivers alerts about flight delays and lets us know of connections that are in jeopardy of being missed. In many cases, TripIt has alerted us to delays before messages from the airlines were sent. This meant we were able to get onto the phone and beat the rush as we changed flights.

The recent updates to TripIt have added alerts to the Apple Watch, so there's no need to fish our iPhone or iPad out when there's a message from the airline or a reminder.

When you're on the ground, TripIt integrates with either Apple Maps or Google Maps. So, once you get to an airport, there are travel directions, in the app, to get you to your hotel or appointment – assuming you've got them loaded into TripIt.

There have been occasions when TripIt hasn't worked perfectly over the last couple of years we've been using it. For example, at one time an airline we regularly use changed the format of its travel documents. But we alerted TripIt's developers and they updated their systems accordingly.

TripIt can also track hotel and airline loyalty programs, as well as store details such as passport and driver's licence numbers, emergency contact information, such as credit card and embassy numbers. Even if you lose your iPhone or iPad, you can access that information from any computer with a web browser.

Even for occasional travellers, TripIt can be useful. If you're on a long holiday, having all your details in one place can be handy and you can easily share plans with family and friends.
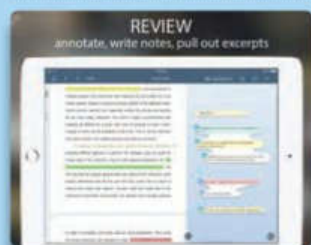
In short, if you travel – TripIt can be hugely useful.

– BY ANTHONY CARUANA
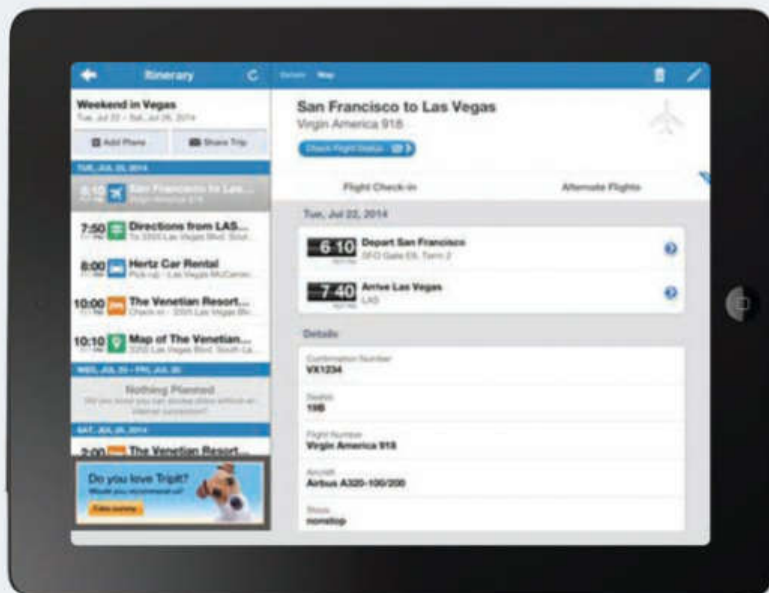
LIQUIDTEXT
PRODUCTIVITY
Liquid Text Inc
iPAD, iPHONE FREE

LiquidText offers gesture-based reading and annotation for documents (PDF, DOC, PPT, web pages) so you can compare distant sections, take notes, build upon thoughts and pull out key facts from the text. It includes a workspace for extracting excerpts, assisting with research and making it a great tool as we head into school exam time.

STAR WARS COMMANDER
GAMES
Disney
iPAD, iPHONE FREE

The Galactic War rages on. Where does your allegiance lie? Will you side with the Rebellion or the Empire? Pick a side and join the fight. You get to build your base, recruit and train your army, strategically plan your defences and lead your troops to victory on war-torn worlds throughout the galaxy. It's your chance to make your own *Star Wars* and avoid George Lucas' continual rewrites!

FING
UTILITIES
Overlook Soft
iPAD, iPHONE FREE

Home and office networks are getting more and more complex with more devices connecting than ever before. Fing scans your network and provides a list of connected devices, their network addresses and MAC addresses. This makes it easy to identify rogue devices and you can store notes and other information, so you know what's happening on your network.

EVERYTHING MACHINE
EDUCATION
Tinybop Inc
iPAD, iPHONE $3.99

The Everything Machine lets kids build anything they can imagine using the hardware and sensors already on your iPhone, iPad or iPod touch. It uses a visual programming language to combine your device's camera, microphone, speakers, gyroscope and screen to make a light, a stop-motion camera, a kaleidoscope, a voice disguiser or anything else you can think of.

FODMAP FRIENDLY
MEDICAL
Fodmap Friendly
iPHONE $2.49

The FODMAP friendly app contains data on specific FODMAP levels in foods, and lists them as percentages, giving you more control over your diet than ever before. It lists numerous new super foods, product availability, manufacturers' details, information about the FODMAP diet itself, and contact details for dieticians with a background in FODMAPs. The app includes FODMAP content of hundreds of various foods including over 50 previously untested foods as well as each food's overall pass/fail rating according to the FODMAP Friendly Certified levels. And if you're on the look out for a FODMAP dietician, the app has a database you can search to find a practitioner near you.

EL CAPITAN NEED TO KNOW

BY DAN FRAKES AND DAN MOREN

At Apple's Worldwide Developers Conference last June, the company revealed El Capitan, the next major version of OS X (version 10.11). El Capitan will be officially released in the spring, but Apple has made a pre-release version of El Capitan available to the public.

What's the difference between the beta version of El Capitan and the shipping version? How do you get the beta software? Will the beta work on your Mac? You have questions about the beta, and fortunately, we have answers.

WHAT IS THE EL CAPITAN PUBLIC BETA?

Apple's Beta Software Program lets Mac users install beta (pre-release) versions of OS X and provide Apple with feedback on those versions.

'Beta' is a term that developers use to indicate when software is close to being ready for release, but still requires testing. The versions of El Capitan available through the Beta Software Program will not be finished products. They'll have bugs, some apps – from both Apple and third-party developers – won't work as expected, some services may not work, and there's even the potential for data loss.

Apple states in its FAQ, "[The beta] may contain errors or inaccuracies and may not function as well as commercially released software."

I HAVEN'T SIGNED UP FOR THE BETA. CAN I? HOW?

Go to the Apple Beta Software Program, click the Get Started link, and follow the steps. You'll need a valid Apple ID and you'll have to agree to the terms of Apple's OS X Beta Software Program Agreement.

The El Capitan beta will be free to download for program participants.

I'M A MEMBER OF THE OS X DEVELOPER PROGRAM. DO I NEED TO SIGN UP FOR THE EL CAPITAN BETA, TOO?

Apple says, "Participants in the Apple Beta Software Program may receive different beta software from participants in the Apple Developer Program." We suspect that if there are differences, developers will get access to new beta versions before the general public, and will possibly receive more frequent updates.

WHAT DO I NEED TO RUN THE EL CAPITAN BETA?

If your Mac can run OS X Mavericks (version 10.9), you can probably run the El Capitan beta. We recommend the same minimum specs for running Mavericks: at least 4GB of RAM (and preferably 8GB) and at least 15GB to 20GB of free drive space.

More important, we strongly recommend against installing the El Capitan beta on your primary Mac. Ideally, you should have a separate Mac dedicated to running the beta, so that if you have any serious problems, you won't be stuck without a working Mac.

If dedicating a Mac to the beta isn't possible, a reasonably safe alternative is to use a separate drive – a second internal drive, or an external drive – for the beta. Install the El Capitan beta on that drive and boot from it whenever you want to test El Capitan. If you have problems with the beta OS, at least they won't affect your 'production' Mac. (Unless there's a bug in the beta that affects data on other drives. Which is why you have backups – see the next item.)

If you have a virtualisation app such as Parallels or Fusion, you can install the El Capitan beta in a virtual machine. This will let you test the new OS, relatively safely, in a separate window.

SHOULD I DO ANYTHING SPECIAL TO SAFEGUARD MY DATA BEFORE I INSTALL THE BETA?

Back up, back up, back up. Unless you're going to install the El Capitan beta on a secondary Mac (or on a secondary drive or partition, or in a virtual machine) and you don't care about losing data on that Mac or volume, you'll want to have a good backup plan – ideally, a separate backup plan from the one you use to back up your main Mac or drive. The last thing you want to do is accidentally overwrite your non-beta backups with data from your beta-test system.

And even if you do install the beta on a separate volume or in a virtual machine, you'll still want to make sure you're maintaining your main backup routine, just in case the beta inadvertently affects other drives or volumes.

Once you've installed the public beta, make sure not to entrust any important data to only your test Mac or drive. Multiple copies of important data are, as always, a good idea.

Coming Soon
iOS 9 and OS X El Capitan Public Betas

The iOS 9 and OS X El Capitan Public Betas are coming soon to the Apple Beta Software Program. We will contact you via email when they are available for download.

I'VE BEEN ACCEPTED TO THE BETA PROGRAM (OR I'M CONSIDERING SIGNING UP). SHOULD I INSTALL THE BETA?

Users of beta versions of OS X have traditionally been developers who wanted to test software on the new OS before release, or people testing the OS itself for compatibility with other apps, services and IT systems. Of course, there have always been bleeding-edge early adopters who just want to see what all the fuss is about. But just because you can, should you?

It's ultimately up to you, but there are a few factors to take into account. As we mentioned, beta software is by definition unfinished, which means that you could run into bugs or flaws that significantly impede your day-to-day activities – and, in the worst case scenario, could result in data loss.

But even if you're OK with these risks and limitations, you may want to consider whether you're ready to be a good beta tester. (See the next item.)

DO I HAVE TO DO ANYTHING SPECIAL TO BE A BETA TESTER? HOW CAN I BE A GOOD TESTER?

Apple doesn't have any formal requirements for beta testing, but remember that the purpose of the beta program is to provide Apple with feedback about the upcoming OS. If you install the El Capitan beta and come across bugs or other problems, you should report those issues to Apple using the Feedback Assistant app included with the beta OS.

Apple is also looking for feedback on specific features and the OS as a whole. If you've ever thought, 'I wish I had a way to let Apple know what I [like/dislike/love/despise] about this feature,' this is your chance – before the OS is even released.

All of this means that taking the time to provide detailed, actionable feedback is vital. For example, a good beta tester does more than file a report that says 'Contacts crashes'. You'll instead want to explain exactly what you were doing when you saw that crash. If the steps are reproducible, even better: 'Whenever I try to add more than three phone numbers to a contact, the Contacts app crashes' is useful feedback.

If you don't have the time or dedication to provide that kind of feedback, you're probably better off just waiting for the official release this spring. Apple would surely rather give a beta program slot to someone who will be a good tester – and, frankly, we agree, as good beta testing means a better, more stable release of El Capitan for all of us.

Of course, you shouldn't expect Apple to change major features based on your feedback alone, and general griping – for example, venting about how you don't like the 'flat' look the company is adopting with its user interfaces – is likely to fall on deaf ears. But bug reports are vital feedback that can, and often do, result in fixes and improvements. And if the company receives enough constructive feedback about a particular feature or interface, there's a good chance Apple's engineers will take a look – if not for the initial release of El Capitan, perhaps for a subsequent update.

HOW DO I INSTALL THE EL CAPITAN BETA?

You'll install the El Capitan beta just as you would any other current Mac OS. You download the installer from the Mac App Store, double-click the downloaded installer app, choose a volume on which to install, and follow the prompts.

HOW DO I SEND THAT FEEDBACK TO APPLE?

The beta version of El Capitan includes the Feedback Assistant app. You launch the app and follow the steps. For example, on the Questions screen, you choose the general area about which you're providing feedback (for example, System Crashes, AirDrop or iCloud Keychain); and then any specific sub-area, if applicable. You describe the issue in a single sentence, and then provide a detailed description, including any specific steps that reproduce the issue.

The Feedback Assistant will request permission to collect diagnostic information from your Mac, and give you the opportunity to attach other files, such as screenshots that show the issue you're reporting. Finally, you'll see a summary of your submission; click Submit to send it to Apple.

HOW DO I KNOW IF SOMETHING IS A BUG OR NOT?

In general, if something doesn't work as it should, that's a bug. If you can't figure out how to do something, that may be a bug, or it could just be an interface that needs tweaking. If something works the way Apple designed it to work, but you just don't like it, that's not a bug, but your opinion may still be useful feedback.

The good news is that you don't have to worry about which is which. Just use the Feedback Assistant app to provide your feedback. Apple will sort it out for you.

WHAT IF I'M HAVING TROUBLE WITH A THIRD-PARTY APP UNDER THE EL CAPITAN BETA? DO I REPORT THAT TO APPLE?

Yes. In fact, the Feedback Assistant app even provides a third-party Application Compatibility category when submitting feedback.

In most cases, however, you should also take a few minutes to provide that feedback directly to the app's developer, as Apple is unlikely to forward it. Most third-party apps provide a button or link (in the Help menu, in a preferences or settings window, or somewhere in the app's main interface) for contacting the developer. If you can't find one there,

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Known Issue in Public Beta 1

Some 32-bit apps may quit unexpectedly. Affected apps include Scrivener, MacSOUP, Torch, Cisco Jabber, iBiz and others. An OS X Software Update that resolves this issue will be available soon.
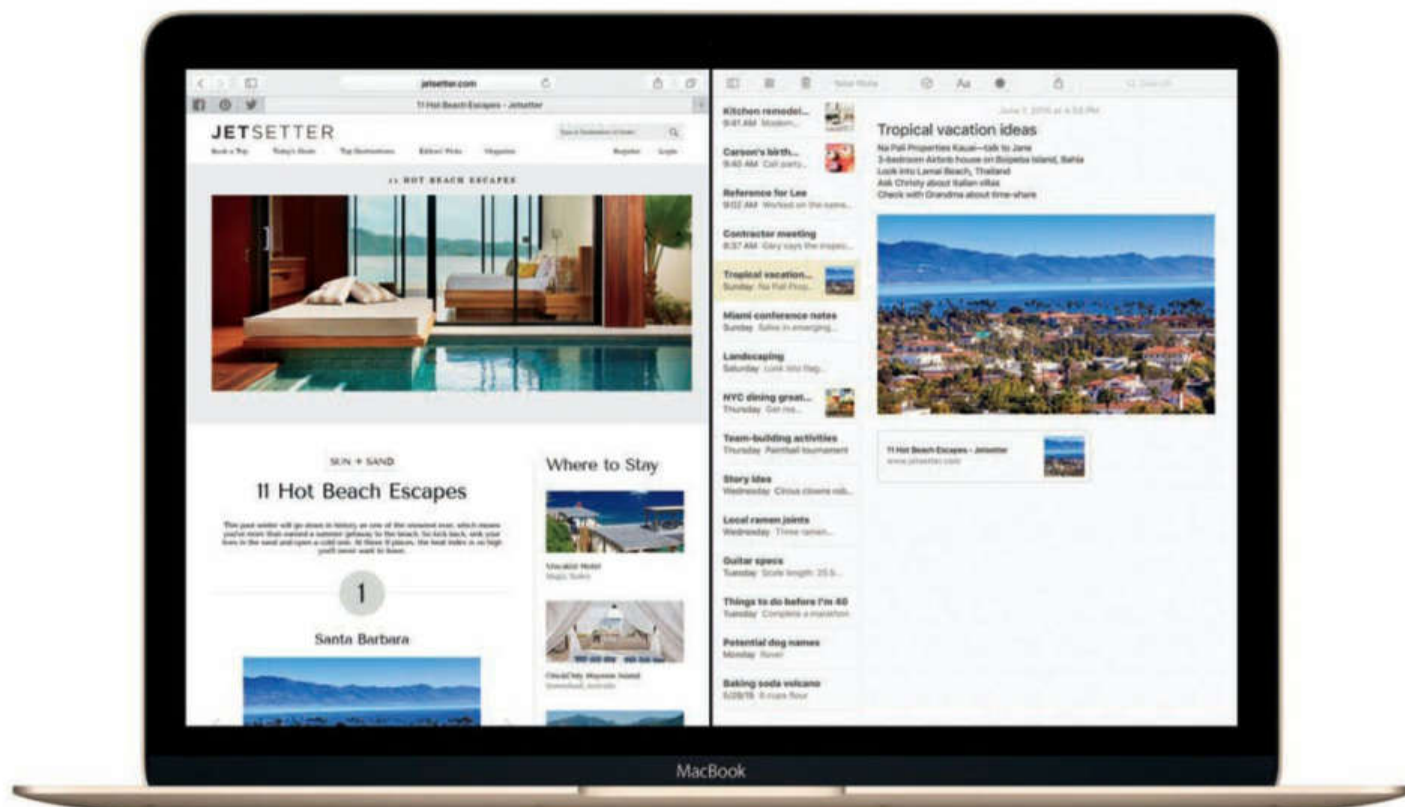
check the developer's website or, for apps purchased through the Mac App Store, use the Support link on the app's Mac App Store page.

Whatever you do, don't leave bad reviews for third-party software – on the Mac App Store or wherever – based on issues with the El Capitan beta. If the app still has issues once the final version of El Capitan is released to the public, criticism is fair game. But it's not OK to ding an app for issues with an OS that hasn't been released.

CAN I TALK ABOUT THE BETA PUBLICLY?

According to Apple and the licence agreement all beta testers must agree to, the El Capitan beta is "Apple confidential information". By accepting those terms, you agree not to discuss your use of the software with anyone who isn't also in the Beta Software Program. That means you can't "blog, post screen shots, tweet or publicly post information about the public beta software".

However, you can discuss any information that Apple has publicly disclosed; the company says that information is no longer considered confidential.

WILL APPLE PROVIDE UPDATES TO THE EL CAPITAN BETA? DO I HAVE TO UPDATE?

Over the course of the beta program, Apple will provide periodic updates to the OS. These will be available through the Mac App Store. It's a good idea to update, so you know you're running the latest version of the El Capitan beta, though you won't be required to update.

WHAT IF I INSTALL THE EL CAPITAN BETA AND REGRET IT? CAN I GO BACK TO YOSEMITE?

Unlike with iOS, you can always revert to an earlier version of OS X, though, depending on how you back up, it's not necessarily a painless process.

If you followed our advice and installed onto a secondary Mac or drive, you can just erase that volume and go back to your 'real' Mac or startup drive and pretend the El Capitan beta never happened.

If for some reason you need to go back to an earlier version of OS X on your El Capitan beta Mac or drive, the easiest way is to make sure the data on that drive is backed up, erase the drive, install Yosemite onto it and then, on first startup, use the OS X Migration Assistant to import your data from the backup.

WILL I BE ABLE TO UPGRADE DIRECTLY TO THE FINAL VERSION OF EL CAPITAN? OR WILL I HAVE TO ERASE MY TESTING DRIVE AND START FROM SCRATCH?

The public beta will automatically update using the Software Update mechanism used for other OS X updates! So it should be very easy.

# How to configure a cheap, secure RAID backup system

BY CHRISTOPHER PHIN

We usually store our photos, documents and more on a single hard disk – or, increasingly these days, a solid state drive (SSD) – but there's always the nagging worry that the disk will fail, taking all your work and memories with it. Backing up using Time Machine, SuperDuper or CrashPlan are all good ways of reducing this risk, but there is another: RAID.

RAID can be complicated, but it's extremely worthwhile – one of the things it can do is to mirror the contents of one disk completely to another, all the time. While cloning your hard disk using SuperDuper, for example, is something that might happen once a day, with a RAID system, every bit of data that's written to one disk is simultaneously written to the second, so that if one drive fails, you have a perfect copy of everything it contained on the second. (And, optionally, if you replace the failed drive, everything will be mirrored back across to it automatically.)

The especially good news is that a mirrored RAID setup like this, once it's configured, appears to you and to your computer as a single disk, so it's as easy to use as a single disk – defining it as a backup target, or simply dropping files onto it as with any other disk – but just safer.

You could use a mirrored RAID system like this to store important archives or current work projects, or you could give yourself extra protection against lost data by using a mirrored RAID drive as the one you back up to using, for example, Time Machine. That way, you're backing up, but your
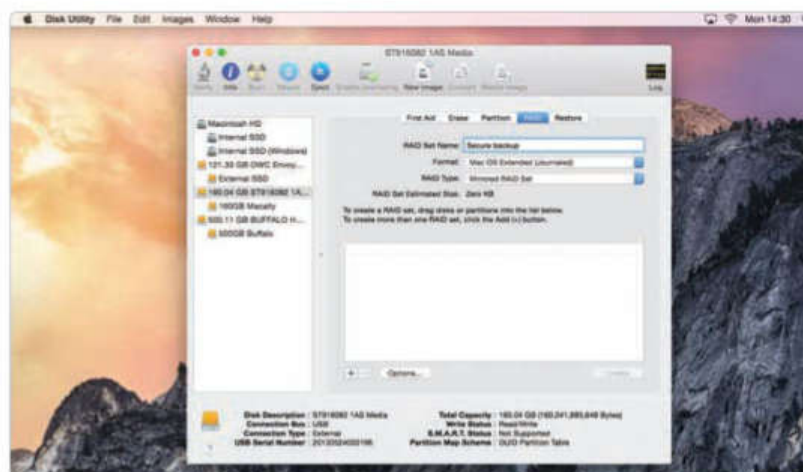
backup itself is doubly protected against failure. This is what we'll be doing here, but you can use a mirrored RAID disk for anything you like that requires a bit more data security.

You can buy external RAID hard disks that have two or more hard disks inside a single box, but you can also easily make your own using the built-in tools in OS X. Standalone RAID systems tend to perform slightly better, but for home or small office use, the difference is negligible. Here, we're going to show you how you can repurpose a couple of old hard disks you may have lying about (or picked up cheap on eBay) to create a mirrored RAID system. Even if you're not sure about how reliable your old hard drives are, with this easy, free method, you can use them with a bit more confidence.

GATHER YOUR DRIVES
For this technique, you'll need two spare drives – usually external, but you can also use internal drives, like if you

have an old Mac Pro or G5. It doesn't matter for the process of creating a mirrored RAID how the drives connect, what size or capacity they are, or what kind of drives they are. It doesn't even matter what format or partition map they are, as they'll be wiped anyway – just ensure there's no data on them you want to keep. Note that the size of your mirrored RAID will only be as big as your smallest drive. In this example we have a 160GB drive and a 500GB drive, meaning the finished RAID will be 160GB – the rest of the 500GB drive's capacity will be wasted.

Note too that this is a handy way of recycling old internal drives – maybe you recently swapped one out for an SSD and it's sitting in a drawer? – either by slotting them into a dock or mounting them in a drive enclosure.

START BUILDING YOUR RAID
Connect your drives, then launch Disk Utility (/Applications/Utilities) and click on either of the two disks you want to build into a RAID. Click the RAID tab

at the top of the right-hand pane, and name the single drive you'll create in the RAID Set Name field. Ensure the RAID Type drop-down is set to Mirrored RAID Set.

ADD DRIVES AND SET OPTIONS

Drag the drives you want to use for your RAID setup from the list on the left into the space on the right. Click Options below this space and check the option to have the RAID set automatically rebuilt.

CREATE THE RAID

Click the Create button at the bottom right, double check you have the correct drives specified, then hit the Create button in the confirmation sheet.

USE YOUR NEW RAID DRIVE FOR BACKUP

Depending on your system, as soon as the RAID set has finished being built, you may get a prompt to use it as a Time Machine backup; if this is what you want to do, click Use as Backup Disk, but otherwise click one of the other options. For example, you may wish to use a different backup system, such as SuperDuper or Carbon Copy Cloner.

Though there are some optional steps below, you're essentially done now. By backing up to this mirrored RAID drive, you're giving yourself some extra protection; now your main
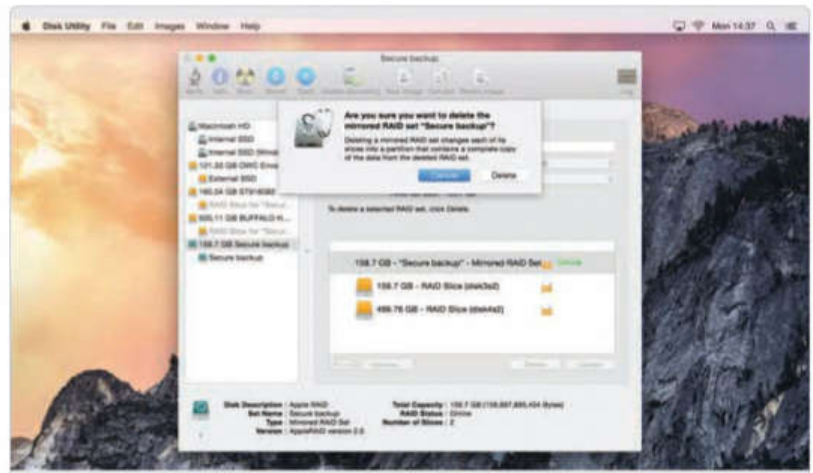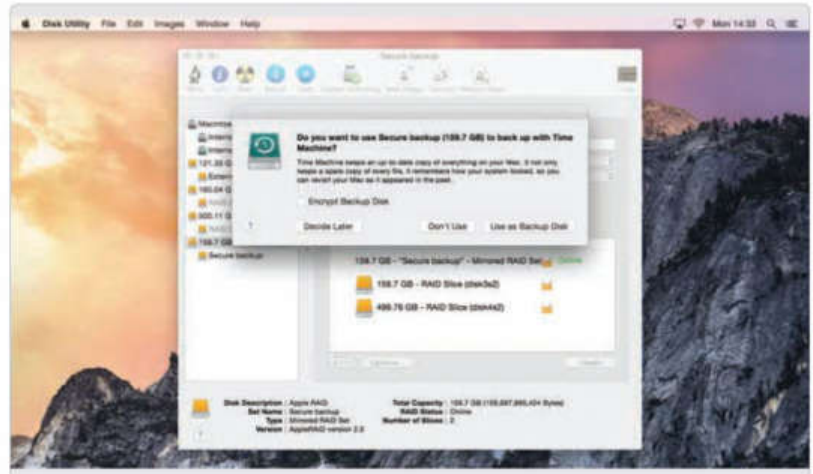
drive can fail and even one of your external backup drives can fail at the same time, and you'll still be able to recover your data. No backup system is guaranteed – all you're doing is mitigating risk with each additional layer of protection you add – but this is a good step in making catastrophic data loss less likely.

INSPECT YOUR SETUP

Before you started this process, you would have had two external drives mounted on your Mac, and showing up on your Desktop and in the Finder Sidebar. Now, it looks like you only have one, but that's because the system is treating those two drives as a single disk. The two drives are still there and connected, but you don't address them independently; you

chuck everything at the new RAID set you just created, and the system takes care of mirroring your data to both drives. Have a look in Disk Utility, and you'll see how things are configured.

BREAK UP THE RAID SET

If you want to redeploy your RAID drives elsewhere in the future, you can easily break apart the RAID system. Select the set in Disk Utility and then click Delete.

As the confirmation dialogue says, all that will happen is that you'll get two drives mounting on your system once you do this, each of which contain an exact copy of the other. New data added to one will no longer be mirrored to the other, but you can now eject one and use it for something else.
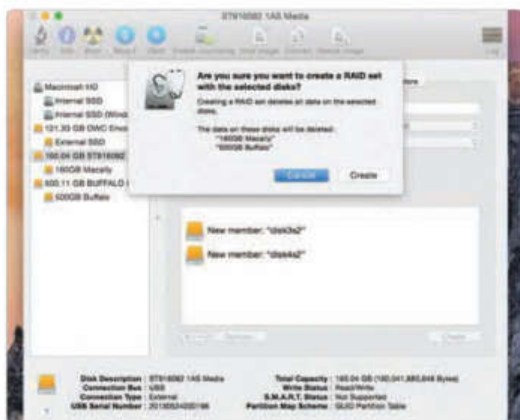
Audiobooks

I f you're an audiobook fan, you probably like to listen to your favourite books in many places: at home, in the car, in the gym or when you're out walking or running. You can use your iOS devices for this, and you can use a number of apps, depending on where you get your audiobooks. Here's an overview of apps for listening to audiobooks on iOS.

You can get audiobooks from a number of sources. You can buy and download books from Audible.com or from Apple's iBooks Store, or you can rip your own audiobook CDs. You can also buy some audiobooks on MP3 CDs; these CDs contain books already converted to MP3 files, which you can add to your iTunes library without ripping.

Where you buy the files affects how you can play them back. If you rip your own audiobook CDs, your files won't have DRM (digital rights management), but if you buy audiobooks from Apple or Audible they will. Because of this DRM, you can't play audiobooks in just any app.

PLAYING AN AUDIOBOOK IN THE iBOOKS APP

Let's start by looking at Apple's tools for playing audiobooks on iOS devices. When Apple released iOS 8.4 in April, the company moved audiobook playback and management from the Music app to the iBooks app. In some ways, this makes sense; both ebooks and audiobooks are a kind of book. However, audiobooks are audio; so playing them in the Music app also makes sense.

Audiobooks you sync from iTunes to your iOS device get shunted into the iBooks app, where you can play them back as you used to in the Music app. If you don't see them in iBooks,

tap the category menu at the top of the window and choose Audiobooks.

There are a number of pros and cons to buying audiobooks from the iBooks Store. I hesitate to recommend that you don't buy audiobooks from Apple, but there's one serious limit to purchasing audiobooks this way. Unlike just about every other type of digital content you purchase from Apple, you cannot re-download audiobooks, and you cannot keep a library of your books in the cloud. With Audible, however, you can always re-download your books, and its app gives you access to everything you've ever bought.

PLAYING A BOOK IN AUDIBLE'S APP

Audible's iOS app can serve as your only audiobook app. It displays your Audible.com library – all the books you've bought from Audible, which are stored in the cloud. It shows you books you've downloaded to your

device within the Audible app. And it even lets you play audiobooks you've synced to iTunes, but only if you bought them from Audible.

The Audible app also lets you choose chapters, but only from cloud or device content, not with books you've synced via iTunes.

BOOKMOBILE IS A FINE ALTERNATIVE TO AUDIBLE OR iBOOKS

How about a third-party app for your audiobooks? The US$4 Bookmobile plays all kinds of audiobooks. (There's a limited, free version you can try out; after that, a US$4 in-app purchase unlocks all the app's features.) In addition to playing any that you've ripped yourself, it can also play audiobooks with DRM sold by Audible or Apple.

Bookmobile is a mighty flexible app. While its interface is a bit hard to get used to, you can use it to change the playback speed with more granular settings than iBooks or the Audible app, skip ahead or back by minutes or seconds, and there's even a driving mode, with simplified playback controls for use in the car.

Bookmobile can play books you've synced to iTunes, or you can use iTunes File Sharing to add files to it directly. You can also add books from Dropbox or other cloud services, and download them from web URLs.

ONE MORE THING

While Apple has moved audiobook playback to the iBooks app, you can still play your audiobooks in the Music iOS app, at least at the time of this writing (iOS 8.4.1).

You've got several options for listening to audiobooks on your iOS device. Try them all out and see which works best for you.
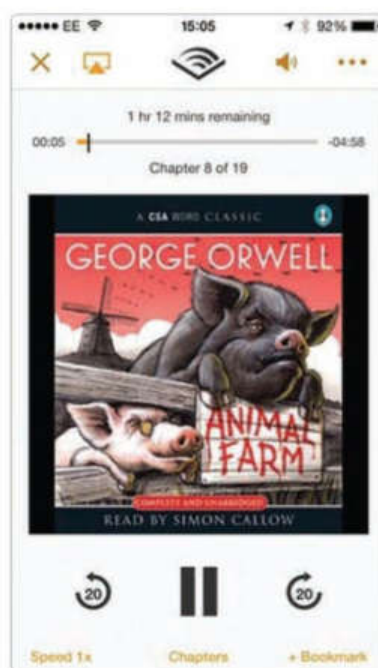
Finding the hidden library folder

BY DAN FRAKES

Inside your home folder is a Library folder – commonly written in Unix syntax as ~/Library, which means "a folder named Library at the root level of your home folder". This folder is accessible only to you, and it's used to store your personal settings, application-support files and, in some cases, data.

The files and folders in ~/Library are generally meant to be left alone, but if you've been using OS X for a while, chances are you've delved inside. Perhaps you wanted to tweak something using a tip from *Macworld*, Mac OS X Hints or elsewhere on the web. Or maybe a developer asked you to delete a preference file, or grab a log file, while troubleshooting a program. Whatever the case may have been, up until Lion (OS X 10.7), you simply opened your Home folder to access the Library folder.

But after upgrading to Lion, OS X 10.8 Mountain Lion, OS X 10.9 Mavericks and, yes, even OS X 10.10 Yosemite, the first time you tried accessing your personal Library folder, you likely found... well, you didn't find. The folder was gone.

THE DISAPPEARING LIBRARY FOLDER

At least, that's how it appears. But rest assured, regardless of your version of OS X, your personal Library folder is right where it's always been, at the root level of your Home folder. It's just that, starting in Lion, and continuing in Mountain Lion, Mavericks and Yosemite, Apple has made the folder invisible.

The reason for this move is presumably that people unfamiliar with the inner workings of OS X often open ~/Library and start rooting around, moving and deleting files, only to later discover that programs don't work right, application settings are gone or – worse – data is missing. This is the same reason Apple has always hidden the folders containing OS X's Unix underpinnings: /bin, /sbin, /usr and the like.

While I understand Apple's motives here – I've had to troubleshoot more than a few Macs on which an inexperienced user has munged the contents of ~/Library – a user can have plenty of valid reasons for needing to access the personal Library folder. Luckily, as I mentioned, the folder is merely hidden, using a special file attribute called the hidden flag. You just need to know how to make the folder visible again.

THE SETTING YOU NEED TO KNOW

If you're still running Lion or Mountain Lion, making the ~/Library folder visible requires a little bit of work. (I came up with – no joke – 19 ways to view the folder in Lion and Mountain Lion.) But in Mavericks and Yosemite, Apple has made the task much more convenient, providing an easily accessible setting for toggling the visibility of your user-level Library folder. Here's how to use it:

Open your home folder (/Users/yourusername) in the Finder. Depending on your Finder settings, this may be as easy as simply opening a new Finder window. Otherwise, choose Home from the Finder's Go menu (*Go > Home*), or press Shift-Command-H.

Still in the Finder, choose *View > Show View Options* (or press Command-J).

Near the bottom of the resulting View-Options palette is a setting called Show Library Folder. Enable this option. Your Library folder is immediately visible.

Close the View-Options palette.

You can access this setting at any time to toggle the visibility of your personal Library folder. For example, *Macworld* senior contributor Joe Kissell has found that applying an OS X update can make the folder invisible, requiring you to manually make it visible again.

Now that the folder is visible, just remember to be careful – because, as I mentioned above, deleting or moving the wrong file(s) inside this folder could cause an application to misbehave, to lose its settings or even to lose data. ⊠

How to start fresh with a new user account

BY JOHN MOLTZ

I am a man of many Macs and have been for some time. When you use a platform over a long period of time, you're bound to run into some problems.

Enter my 2009 MacBook Pro. This hardy workhorse was my main machine for years. I upgraded the internal drive to a 250GB SSD and maxed the RAM out at 8GB. Even so, a Core 2 Duo doesn't compare to an i5, even at a slower clock speed, so I eventually bought a MacBook Air with half the drive space and half the RAM. Now the two machines split duties. While I go about my daily work and play on my Air, the Pro sits in my home office, hosting my definitive iTunes and Photos libraries, my ancient emails and any old files I still sometimes want access to.

Up until last week, my user account on the MacBook Pro was one that had been migrated forward through OS X upgrades and Migration Assistant since moving from OS revision to OS revision and machine to machine since – and I can't believe I'm writing this – 2003. That means this account has existed since I was using Mac OS X 10.3 Panther on a PowerPC machine (I tried earlier versions of OS X, but probably still mostly used OS 9 until about then).

LOOK AT HOW OLD THESE FILES ARE!

Running the OS X upgrade process (as opposed to doing clean installs) and using Migration Assistant to move accounts to new machines both have worked fairly well for me. But over a period of 12 years, some unwanted baggage can accumulate, and that user account you rely on can get a little temperamental. How does a computer with a more than a decade-old user account express its temperament? It's slow. It lets you rename the computer in the Sharing Preferences pane, but doesn't change the name in the Terminal. It refuses to let you connect via screen sharing. It takes two tries to reboot it. It's generally just surly and difficult.

Enough was enough. It was time to start over with a fresh install.

BACKUP, BACKUP, REPEAT

This wasn't going to be easy, though. As I said, this account had several media libraries, was where I synced music to my Sonos from, had Mailboxes with mail in them dating back to 2001, was our *Minecraft* server and had a mess of old games and documents I still wanted. I couldn't just trash everything.

SUPERDUPER TO THE RESCUE

The first move, obviously, was to back up. So I backed up three times in three different ways. Really. I normally keep two backups of my important drives, a daily one in Time Machine and a weekly one via SuperDuper. Why both? Time Machine can be fickle and a SuperDuper backup provides a complete, bootable disk image in case a drive goes south on you (sometimes a drive just takes off to Mexico) and you need to run OS X off it in an emergency.

The third backup was just a straight copy of files from my Documents folder, my iTunes and Photos libraries, those mailboxes and a few other things I didn't want to lose. I probably didn't need this, but hey, I've got drives and when you're blowing up a user account with all your important crap, it's not the time to be stingy.

CLEANING HOUSE

Everything backed up, it was time to reformat the drive. That proved easier said than done. I had saved the Yosemite install application when I first upgraded to 10.10 (if you don't have it, you can download an updated version from the Mac App Store) so I copied it straight to the Applications

folder on the drive I wanted to reformat and ran it. It rebooted and started the Yosemite install process, but it never gave me the option to format the drive. When the process was done, I found I had the same user account, just running 10.10 instead of 10.10.4. That… was not what I wanted at all. I had thought you could reformat the drive via that process, but apparently it's not an option when you're running the install from the drive you're installing to.

I could have booted into Recovery mode to run the installer, but then I would have had to wait for it to download. Who's got time for that in this economy? But guess what I had? A bootable FireWire 800 drive copy made via SuperDuper. So I booted off that, reformatted the internal drive and

ran the installer. Then I rebooted off the freshly formatted drive, finished up the niceties like signing in to iCloud, and ran the Yosemite updates from the Mac App Store. (I could have avoided this by downloading the updated installer, but I figured the updaters would be smaller. That may not have actually been true.)

Now to put my data back. Remember, I was starting over. Migration Assistant had been bringing forward some amount of unidentifiable cruft dating back to 2003 that I was trying to get rid of, so using it was not only not an option, not using it was the whole point. I needed to copy things back in old school.

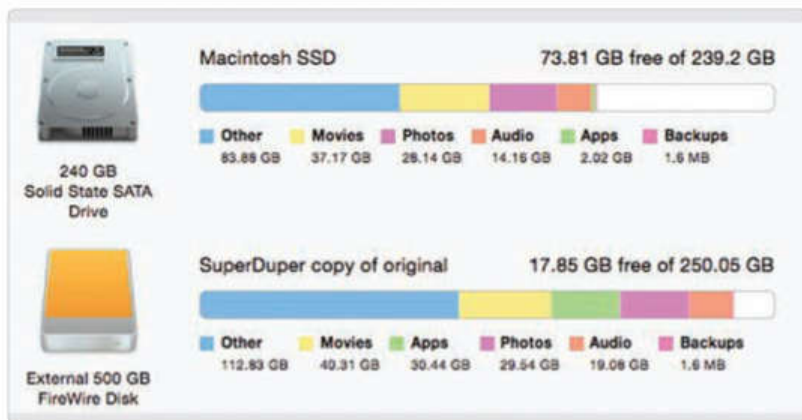When you have enough backups, weird error messages like this aren't a cause for (much) concern.

Documents, my iTunes library, and the Mail mailboxes copied back from the drag-and-drop copies I made with no problems. The Photos library, however, failed to copy back saying "some data in Photos Library could not be read or written". Ah, yes. Probably all of my ineffable photos. Understandable. They do have a certain je ne sais quoi about them. Well, this is why I made three copies. The copy from the SuperDuper backup worked fine.

After importing the Mailboxes to Mail, I pointed iTunes and Photos to the correct libraries. In iTunes you can change this through Preferences or by holding down Option when starting the application. In Photos the only way to do it is by holding down Option. I noticed both applications have different prompts for selecting a library at startup because the person in charge of consistency at Apple was off that day. I also had to reinstall Java for the *Minecraft* server, but I left Flash behind (it's long gone from my MacBook Air). I refrained from installing any of the dozens of third-party applications that had been on the machine previously. In its role as a data host, it probably won't need them.

Now I had a fresh install of Yosemite with all of my ancient data, but without whatever Bush-era settings were causing problems. I wouldn't say it's exactly like getting a brand new machine, but it's at least a major improvement. Because I left a host of applications behind, I have far more drive space. Things behave better almost across the board. It's faster, happily lets me screen share, reboots without any trouble, and has its own new name instead of the one I migrated that it didn't want to change.

While this process takes some time, I recommend it if you've used Migration Assistant and OS X upgrades over existing installs for years and have a Mac that's giving you fits.

STM READER TIP

!

Getting rid of bad autocorrect suggestions

Does your autocorrect seem to have a mind of its own and often suggest nonsensical replacements for what should be normal words? Here's how to fix it.

Go into Settings, tap on General, scroll down to the bottom of the screen and tap on Reset. On the next screen, tap on the option Reset Keyboard Dictionary, you will then be prompted for your PIN and finally an option will appear at the bottom of the screen where you can choose to Reset Dictionary or Cancel, tap on Reset Dictionary and it will remove any garbage suggestions that have been given in the past.

This worked wonders for me and may help some others.
Jamie Dodds

■ **EACH MONTH, STM** gives a prize to the *Macworld Australia* reader who submits the best and most useful tip (undocumented tips preferred). This month's prize is a comfortable and portable STM sequel small laptop shoulder bag worth $99.95.

Your daily gear travels in sleek protective style. The sequel is the perfect, just the essentials bag for your 13in laptop, tablet, a couple of files, cords and chargers.

Features:
- main flap secured with light but durable brushed aluminium buckle with easy one-handed click-and-go design
- laptop compartment lined with soft nylex and high-density foam to protect most 13in screens (will hold most laptops from 12-14in)
- front zippered stealth pocket is lined and accessible without opening main flap – perfect for sunnies or a phone
- dedicated tablet slip pocket with soft nylex lining
- organisational front pocket for biz cards, pens, keys, etc
- slip rear pocket for some reading material with quick drop phone pocket
- luggage pass through secures the bag to the handle of your wheeled travel piece
- padded, non-slip shoulder pad for a comfortable carry
- quick cam-adjust shoulder strap for both cross body and shoulder carries, and
- water resistant 320D brushed poly main fabric with 640D reinforced bottom fabric
    www.stmbags.com.au

Belinda Stevenson is working on editing and preserving her photo collection. As she's battling illness, this is a critically important task and she's asked us for some help on a few different aspects of this task.

1. What are your thoughts on Pixelmator and Noiseless? I'm wanting a simple editing program.
Image editing programs come in all shapes and sizes. Some are very simple while others are more complex. The question is – what sort of editing do you want to do?

For simple tasks such as removing red-eye and other blemishes, altering the brightness, contrast, colour saturation and exposure you may find the editing option in Photos or iPhoto will work adequately.

Personally, I've not used Noiseless, but I'm a big fan of Pixelmator. Pixelmator is similar in many ways to Photoshop, but I find it easier to use. One thing though – some people who I've spoken with, who are vision impaired, find it difficult to use as the icons use light text on a dark background and that can be hard to see.

2. I'm wanting a simple photo/video (short family video) slide show/ movie program that is easy to use, not expensive. I can't operate iMovie as it's too hard for me.
Again, you may find the slide show features in iPhoto or Photos adequate for your needs.

In Photos, simply put the images you want into an album and press the Play button on the top toolbar. This will let you pick a soundtrack and some simple visual effects for the slideshow.

If you're looking for a tool that automatically creates a video slideshow, then there are some options other than iMovie such as FotoMagico and Photo to Movie although they will cost, as they aren't free. If you're struggling with iMovie, there are some easy to follow video tutorials on YouTube that demonstrate how to do this.

3. I'm new to Apple and struggling. I'm desperate to digitise family photos, but confused. I need to get rid of dupes and doubles and edit some.
Based on the information in your email Belinda, I think you need to streamline the process you use for editing and saving photos.

First, it doesn't matter whether you're using iPhoto or Photos, but I'd suggest sticking with one. You can do most of the editing you've described to us in your email *(Editor's note: we've edited some of Belinda's email, omitting the details of the process she's currently using with difficulty.)*

I'd create a folder in Photos or iPhoto called 'Correct' rather than a folder on your desktop as you've currently been doing. By the way, if you've already edited a bunch of images and they are finalised you can drag them straight to the 'Correct' album in Photos or iPhoto.

As you edit each image, put it in the 'Correct' album.

I understand you've been using Preview to do some editing, but I think you'll find everything you need in Photos or iPhoto, so there's no need to take your images out to a desktop folder in order to open and edit them in Preview.

Once you have all of the final edited versions of your images in the 'Correct' album in Photo or iPhotos, you can export them for saving to some other media that's easy to share with your family and friends.

4. Time Machine and backup of precious family photos. Now I want these photos on the desktop kept forever for the family, but Time Machine is not going to do that, is it? How do I save photos forever without the cloud, please? Do I need another external drive? Just for photos?
Once you've processed all of the images you can export them to almost any place you like. As these are precious memories, I'd suggest saving them at the highest resolution

possible, so that they can be faithfully reproduced in future.

If you're avoiding the cloud, then an external hard drive is a good place to start. It's hard to know how large a drive until you know how many images you are dealing with, but a 1TB drive will cost around $100 and hold many tens of thousands of images.

If you're talking about fewer than 1000 photos, then it's possible they'll fit on a 8GB or 16GB USB memory stick.

As these are important, I'd recommend following the 3-2-1-0 system for backing these images up: at least three copies of the images on at least two different types of storage with at least one copy at a different location with no errors.

If the images are to be distributed to several people, then creating multiple copies and having them in multiple locations should be easy to achieve.

Time Machine is a good first step for protecting your images while you're editing them. But it's not an effective tool for sharing the images with other people. ▣

! WHEN IWORK DOESN'T

The Apple OS X productivity apps formerly known as iWork (Pages, Numbers and Keynote) allow a fair amount of data manipulation and back-and-forth handling. The latest major revisions to each one brought the code up-to-date, but left features critical to some behind.

In the past, I wrote about how to manage the previous versions of these OS X apps so you could retain access and even round-trip files between old and new.

Before and since then, many of you have written in with questions about merging data, selectively printing or exporting data or gaining access to options that you think should be there. In this column, I'll try to help, and point you to previous Mac 911s that may offer more in-depth assistance.

! IN PAGES 5, PEOPLE ARE AFRAID TO MERGE

Despite mail merge and data merge being one of the greatest features (often horribly implemented) of business software, Apple stripped it out of Pages 5. However, earlier this year, Chris Breen wrote about a free app that provides much of the functionality: Pages Data Merge. It's not supported by Apple, but it's made by a long-time AppleScript guru there.

? SAVING FIELDS

The only problem is that once I've filled all the fields in the app in order to merge the data, I'd like to keep and save the filled window so I can reuse it next time instead of needing to refill it again. But Save As in the menu remains grey.
Charles Giai-Gischia

In the current state of the app, you can't save the state of your field assignments. The app is still being updated, and I'd suggest visiting an Apple Support Communities thread, where there's an active discussion

going (go.macworld.com/active), and making a feature request. (You'll note I asked the question on that thread in case I missed a setting.)

? PLACEHOLDER TAGS

I think I have followed the steps, and my placeholder tag in my Pages document is fine: the placeholder 'Name' is the same as a column in my Numbers spreadsheet. When I begin the merge, I get the following message: "The import table contains no assigned placeholder tags." How do I create assigned placeholder tags?
Jan Taylor

Select your placeholder text in Pages, choose Format Advanced Define As Placeholder Text.

? ONE FROM COLUMN A, 700 FROM COLUMN BACK

I need to create a Pages document that contains just a list of (700) names in three columns. When I select and copy just the Names column and paste it into the Pages document, it goes in as a table. How can I create a list of names without retyping?
Shirley Allan

The easiest way to preserve formatting and line breaks is slightly annoying, but will get you where you want to go. Unlike Word, you can't just select a table and opt to convert it to text. Instead you have to go through a few steps.

1. Select the cells you want to copy in Numbers, just as you did.
2. In Pages, paste. This will create a floating table instead of inserted into text.
3. Select all the cells in Pages. Make sure you don't select a heading row cell, or this won't work.
4. Select Format | Table | Merge Cells. (This is greyed out if different kinds of cells are selected.) Now you have a single cell with all the entries and with line returns.
5. Double-click in the field to get an insertion point, and choose Edit | Select All.
6. Copy that selection, which contains all your items.
7. In the toolbar, click the Text icon, which creates a Text box. Double-click to get an insertion point and paste.
8. In the Format inspector at right with the Text box selected, click the Text tab. Enter 3 in the Columns field. You may need to create boxes on multiple pages to contain all the names. (A + appears at the bottom of the Text box if contents can't fit the display area.
9. Delete the imported table.

? DOES NOT SHARE WELL WITH OTHERS

I want to share data from Pages 4. The options (in the Share menu) Send Via Mail and Export are greyed out. Their submenus are black. Selecting the Mail menu does not bring up Mail – nothing changes.
Tom McIntosh

This is because of updates to the Mail app and OS X. You're not doing anything wrong: these options simply

no longer work. You'll need to export a file and attach it via email, adding a step.

? BATCH PRINTING PAGES FILES

■ **I have created 30 individual documents that I now want to print. How can I make these into one file and avoid having to open each in turn, print it, close it and open the next for printing? In the old Pages merge, they all arrived in one file and were printed in turn with just one command.**
David Palmer

In Pages 4, you had the option of viewing Thumbnails and then dragging them into other documents to combine them. I'm not sure precisely how you created these particular Pages files,

but if you find them in the Finder, select them all and then choose File Print, you'll get the desired result.

? FROM A TO Z

■ **I have a 47-page document that has columns for occupation, first name and last name. I'd like to sort it alphabetically by first name, and then print the document.**
David Palmer

This is possible within Pages '09 (version 4) and the latest Pages (version 5), although in different places. You don't have to do a round-trip through Numbers to make this work.

To prep for sorting, first make sure that your headers are actually set as a heading row. This prevents them from being sorted, and they remain

at top. Oddly, I can't find any way to turn an existing row into a header row. Instead, you need to add a header row and then copy and paste your column headers into it (Format | Table | Header Rows, pick 1 or more).

In Pages '09:
1. Click the header cell for the column you want to sort.
2. In the Inspector (View | Show Inspector), click the gear in Editor Rows & Columns.
3. Select Sort Ascending, which will alphabetise the results.

In Pages 5:
1. Hover over the header cell for the column you want to sort. A downward-pointing arrow appears.
2. Click the arrow, then click Sort Ascending to alphabetise the results. ✄

Smart bulbs

By Adam Turner.

LifX

The brightest of the bunch and available with a range of connectors, LifX's Australian-designed smart bulbs are great for shedding light on the situation.

Producing a very bright 1000 lumens, the bulky 14W LifX LED lights are about as bright as a traditional 100W bulb. Available with bayonet, screw or downlight connectors, they're a good choice for locations where dim mood lighting just won't cut it – such as the kitchen while you're cooking, lounge room while you're reading or dining room if you're working at the table. They have the highest running costs of the 14W bunch, but they'll still cut your power bill significantly compared to traditional bulbs.

The LifX range has expanded to include the cheaper 11W 'White 800' – a 60W-equivalent bayonet/screw bulb that doesn't change colour, only working in shades of white. There's also the 11.5W 'Colour 650' – a 40W-equivalent downlight. These bulbs may be a better choice for areas where you only need mood lighting.

The LifX bulbs connect to your home Wi-Fi network, so you don't need a central hub and you can control them via the LifX iOS/Android app – grouping them into zones, changing colours and creating pre-sets so you can quickly set the mood. You'll also find funky options like candle flicker, lava lamp, strobe lights and a visualiser, which changes the colours in time with the music playing in the room.

You can control the bulbs via Apple Watch or Android Wear, but there's no remote access while you're out and about. At this stage there is no support for Apple's HomeKit smart home ecosystem, but it could happen in the future.

⚡⚡⚡⚡⚡ From $60 / LIFX
www.lifx.com

PROS Bright; range of bulbs and connectors

CONS Bulky

Philips Hue

Offering both smart bulbs and switches, the Philips Hue ecosystem makes for a very smart home.

In Australia we have the slender E27 Philips Hue bulbs, which are only available with Edison screw fittings, so you'll need adapters to use them with bayonet light sockets. They're 8W LED bulbs producing 600 lumens, so they're almost as bright as a 60W traditional bulb.

The Hue bulbs communicate via the ZigBee wireless standard and come in a three-pack starter kit with a ZigBee control hub, which links to your home network via Ethernet cable, so you can control the bulbs via Android or iOS devices including the Apple Watch. To make life easier, there's a Hue Tap switch you can stick on the wall. There's also a new slimline Hue wall switch on the way with a built-in dimmer.

Along with the smart bulbs, Philips offers the Hue Bloom lamps, designed to shine upwards onto a wall, as well as the two-metre flexible Hue LightStrip.

The Philips Hue app lets you group the bulbs and choose from colour 'scenes' or create your own. Advanced options include timers, remote access and geofencing to trigger events depending on your location. Philips has also opened them up to developers and you'll find a range of third-party Hue apps. The Hue ecosystem also works with the If This Then That cloud-based home automation service and support for Apple HomeKit is coming. You may wish for slightly brighter bulbs, but Philips' Hue is the pick of the bunch in terms of smart home integration.

⚡⚡⚡⚡⚡ From $290 (three-pack starter kit) / PHILIPS
www.meethue.com

PROS Smart light switches

CONS Screw only

Yeelight

They help set the mood, but Yeelight's smart bulbs aren't bright enough for every occasion.

Available with bayonet or screw connectors, the bulky Yeelight 6W LED bulbs only produce around 500 lumens – a little brighter than a 40W standard bulb. They're handy for mood lighting, but you wouldn't want to read beneath one. Along with bulbs there's also the $69.95 Yeelight Bluelight, a two-metre string of LED bulbs designed to hang around the house.

The Yeelight bulbs can change colour – pre-sets include sunlight, reading, nature and romantic, or you can create your own. You can also call on a collection of colour swatches or match colours from images in your camera roll, plus there's a disco mode that sees the bulbs change colour and pulse with your music.

The Yeelight iOS/Android app controls up to 10 bulbs and communicates with them directly via Bluetooth, so you don't need a home Wi-Fi network or a central control hub. You can sort the bulbs into groups, but the trade-off is that you can only command them from one device at a time and you may find yourself wrestling for control.

If you adjust the lights in the lounge room using your iPhone and then leave the room, someone still sitting on the couch can't take control of the lights from their mobile device. You retain sole control until you kill the Yeelight app, disable Bluetooth or walk out of range of the light – a catch that may disrupt household harmony.

The Yeelight falls short on home automation features; you only have a basic one-off timer for switching the light on or off. There's no remote access to the bulbs and you can't link them to the If This Then That cloud-based home automation service or to Apple HomeKit.

Elgato Avea

They play nicely with Apple's HomeKit, but Elgato's Avea smart bulbs are too dim to replace most of the lights in your home.

Elgato is better known to Mac users for its digital TV gear, but it's looking beyond the lounge room with the Avea smart light bulb. Shaped like traditional light bulbs, the Avea bulbs are only available with Edison screw connectors, so you'll need an adapter to use them with bayonet light fittings. They're the dimmest of the bunch – 7W LED bulbs which only produce around 430 lumens, roughly equivalent to a 40W standard bulb.

The Avea bulbs would suffice for mood lighting, but you wouldn't want to permanently use them as the ceiling lights throughout your home. They support a range of scenes such as Magic Hour mimicking sunset, Northern Glow using a variety of blues and greens, and Cosy Flame emulating the feel of a campfire with flickering reds, yellows and oranges. You can also choose from solid colours and then tweak the brightness and hue to taste.

The bulbs rely on Bluetooth, so they don't need a separate hub. Their big selling point is they work with Apple's HomeKit ecosystem, letting your bulbs become part of a wider home automation system. You can control the Avea bulbs from iOS devices or an Apple Watch, but there's no Android app. You also miss out on remote access and support for the cloud-based automation service If This Then That. While they look the most like everyday light bulbs, their low brightness means that you'd only want to use them for special occasions. 🖾

🕯🕯🕯 **$59.95 / YEELIGHT**
www.yeelight.com.au

PROS Inexpensive

CONS Dim; few automation features

🕯🕯🕯 **$67 / ELGATO**
www.elgato.com

PROS HomeKit compatible

CONS Dim; screw only

iRig Mic Studio

I have just finished a session recording narration for a podcast audio tour with the recently released iRig Mic Studio. The latest addition to the iRig Mic family, the Studio describes itself as a "studio-quality one-inch capsule, low-noise preamp and high-quality A/D-D/A converter for high-definition 24-bit, 44.1/48kHz sound". The front of the unit has a microphone gain control and a headphone level control. At the rear is a stereo output for headphones. A multicolour LED indicator on the front of the unit monitors my input status. Bright blue tells me I'm connected and ready to go. Green says my signal is too low, red means too high, orange is just right.

The Studio comes with a micro-USB to Lightning cable and a micro-USB to USB cable, which attach via a socket in the microphone's base. A 30-pin cable is also available if you have an older iPhone or iPad, but that's a separate purchase. It is surprisingly small at only 45mm wide and 117mm high, but it feels solid in my hand and more than capable of handling the rigours of recording in the field. It's a simple matter to attach the microphone to the small metal tripod and to adjust the angle to suit. The online manual gives some handy mic placement tips for voice and instrument recording and is well worth reading.

The Studio works with any Core Audio application. For my purposes I'm using GarageBand on my iMac. It's a simple matter to connect the microphone, create an empty vocal track, do a quick level test and then start recording. As a point of comparison, I used a much larger studio microphone from a well-known Australian company for some earlier narration sequences. In terms of quality, it was virtually impossible to distinguish between the results I got with that and the tracks I recorded with the Studio. There was very little background noise and crystal clarity. For example, one narrator had significant sibilants, which the Studio unfortunately captured in minute detail! That was easily fixed using GarageBand's capable De-esser tool.

Mobile users are also accommodated. As well as being very compact and with a rugged metal construction, the iRig Mic Studio can be used with an audio app on my iPhone or iPad to give me a highly efficient portable system to capture broadcast quality sound on the road. If you're not completely committed to Apple's ecosystem, there's also support for Android devices, although I didn't test those out.

The iRig Mic Studio comes with a suite of vocal apps with cross-platform compatibility. iPhone, iPad and iPod touch users can use VocaLive, a powerful effects processor and multi-track recording app that features a selection of 12 professional real-time vocal effects. EZ Voice for iPhone, iPad and iPod touch and EZ Voice for Android are streamlined and easy-to-use sing-along apps that make it easy for vocalists to practise with any song in their music library. iRig Recorder for iPhone, iPad and iPod touch and iRig Recorder for Android are straightforward apps for field recording, podcasting and note taking and more. There's also Mic Room, a microphone modelling app for iPhone and iPad.

Bottom line. A price of $195.95 may seem a bit steep, but I've learned not to confuse size with quality. This is a fully professional unit. It comes in either silver or black.

– KEITH WHITE

IK MULTIMEDIA
www.ikmultimedia.com

PROS Rugged; portable; studio quality sound

CONS None significant

$195.95

Linksys AC2600 MU-MiMo Gigabit Router

Linksys has long been one of the most well-known and popular brands in the consumer and SMB router market. In 2003, after 35 years of independence from its foundation, it was acquired by Cisco. Ten years later it was bought by Belkin and is now part of Belkin's family of consumer and SMB products.

The Linksys AC2600 MIMO Gigabit Router is a premium router designed for maximum performance – and it's priced accordingly. However, the first thing that stood out for us was the appearance. Many routers are designed to be hidden away. But the AC2600 screams to be noticed with its space age shape and four antennae.

Setting up the router was reasonably easy. The instructions are clear and the wireless functions are locked down out of the box. The documentation includes a unique password for the router, so there's little chance for an opportunistic hacker to access your network during the initial configuration.

Once we were set up, the browser-based configuration program made it clear a lot of thought has gone into the AC2600. Despite being an advanced and complex piece of networking equipment – the first router we used back in the late 1990s was far less functional and cost around $10,000 – the Smart Wi-Fi application laid everything out clearly with very little technical jargon.

In particular, we really liked the Network Map, which presented all of the devices connected to the network, either via Gigabit Ethernet or over the 802.11ac wireless network, on a simple diagram. Clicking on each device's icon gave us options for applying Parental Controls or reserving a network address for the device. This is useful if you need a device to keep the same TCP/IP address. For example, this is useful if you have a NAS or web server that you need to access from outside the local network.

In addition to the four Ethernet ports, the AC2600 includes USB and eSATA ports for sharing storage. However, you won't be able to use that storage for Time Machine backups.

The MU-MiMo part of the AC2600's name stands for Multi-User Multiple Input Multiple Output. And this is where modern households will see the real benefit of this router. What we found was wireless performance, especially on the 5GHz radio, was outstanding.

The ability to prioritise certain traffic isn't new – we've had Quality of Service (QoS) on routers for some time. However, it's typically been very difficult to use and required entering network addresses and understanding applications and specific network protocols. Linksys' approach lets you select devices from a list and simply drag and drop them into a priority ranking. For example, we placed our Apple TV at the top of the list. Then we had the computer we work from next with the kids' laptops and iPads down the list. That list could be a mix of devices, online games and applications. So, we could put Skype above the Apple TV.

The only time we would need to understand our ports or protocols would be if we add anything to the lists already provided by Linksys.

Linksys has also done its homework with a well-designed mobile app for the AC2600. The Smart Wi-Fi app – a free download from the App Store – gives you full control of the router even when you're not at home. That includes seeing who's connected as well as being able to turn on Parental Control and prioritisation if you need to ensure the kids are doing their homework while you're out.

One thing we did notice was the Device Information on the Network Map wasn't always perfect. For example, the MacBook Pro we had on was identified as running Windows 7, and the Make and Model of our Smart TV was incorrect.

Bottom line. If you're looking for a high-end, high-performance router that's easy to use, then the Linksys AC2600 MU-MiMo Gigabit Router will fit the bill.

– ANTHONY CARUANA

LINKSYS
www.linksys.com.au

PROS Easy to set up; performance

CONS Some minor errors in Network Map

$429.95

Belkin WeMo Ecosystem

Belkin has been a long-time player in the computer accessory business. So it's no surprise that it has become a significant player in the home automation game already with its WeMo line of products. We've installed several around our home. Rather than reviewing each one separately, we're going to look at life in a home that's been given the WeMo treatment.

The WeMo product ecosystem is very extensive. There are light bulbs, that come with both screw and bayonet fittings, smart switches that replace your existing switches or work off existing power points, security cameras and motion sensors, as well as appliances from third parties that integrate WeMo's automation smarts.

We set up our place with a WeMo LED Lighting Starter Kit, a WeMo Insight Switch and a WeMo Switch.

IT STARTS WITH THE APP

The thing about home automation is that it's easy to get drawn into thinking purely about the hardware. But real automation needs an intuitive software system that makes it all hang together. The WeMo app – a free download from the App Store, or Google Play Store if you're an Android user – makes it easy to carry out most activities.

The app is critical, as it's needed whenever you add a new device, as well as when you want to control something. For the most part, the app worked perfectly, but we did encounter a few hiccups.

We started our setup by installing one Smart LED Bulb to a light fitting. That went smoothly. A day or two later, we added a second bulb. The 'Add a new device' option took a couple of goes before it worked and the second lamp was online. Similarly, we hit some glitches when added the two switches we set up.

Like any connected device, there are firmware updates that were needed. Although the process was automatic, we found there was a day or so when we were informed that new firmware was available. This occurred a couple of times, but we had no easy way of knowing if different devices were being updated or whether previous updates hadn't worked correctly.

The app also makes it possible to create rules and even work with IFTTT (If This Then That) so your lights and other devices can interact with non-WeMo systems. For example, we used a recipe (an IFTTT set of instructions that's been saved) that automatically turned the lights on when we get home by using location services on the iPhone and switched them off when we leave.

All of those functions can be controlled either while you're at home or remotely if you allow remote access to the WeMo ecosystem.

WEMO LED LIGHTING STARTER KIT
Price: $179.95 (additional bulbs $59.95)
The Light Starter Kit includes two Smart LED Bulbs and a WeMo Link.

The WeMo Link is the hub of the lighting network. It can connect up to 50 bulbs to your WeMo setup. We plugged it into a power outlet in the centre of our home – a medium-sized three-bedroom unit. It can be used with the supplied bulbs as well as many other options from WeMo's range, including spots, garden lights and the Osram LIGHTIFY Flex strip lights.

The Smart LED Bulbs we tested came with screw fittings. In order to use one with an existing light fitting, we used a bayonet to screw adapter. These cost about $5 each from many lighting retailers. It's worth noting these adapters add a few centimetres to the distance the bulb protrudes from a light fitting. In our case, this meant the class cover no longer fitted over the bulb.

WeMo does offer bayonet fittings for both single bulbs and the Starter Kit – just make sure you buy the right fittings for your home.

Once we plugged the Link and bulbs in, we set them up using the WeMo app on our iPhone 6 running iOS 8.4.1.

Turning the lights on and off and controlling their brightness was easy. We also set up timer rules so the light in our lounge turned on automatically at sunrise each day and powered down just after midnight. This rule worked alongside the IFTTT recipes we had in place.

The app allowed us to dim the lights and quickly set a power-off timer. This was useful as a signal for when we ought to get to bed – setting the lounge room light to power off after a couple of hours was a good prompt to get to bed.

The bottom line. The WeMo Light Starter Kit is a good first foray into the world of automation.

WEMO SWITCH
Price: $69.95

The WeMo Switch plugs straight into a power point and then allows you to connect other devices through it. It connects to your network over Wi-Fi and doesn't need a WeMo Link to be used.

Not every device has been designed to have its power turned on and off remotely. We connected the WeMo Switch to the power point in our bedroom and then piggybacked a power board that delivered power to a TV, speaker unit and Google Chromecast.

The challenge in most homes is that those power outlets aren't always easy to access or we lack the motivation to squeeze into limited spaces to turn the power off manually. The WeMo Switch makes that task easy.

Once the WeMo Switch was added to the WeMo app – again, this took a couple of goes to work, but we got there in the end – we could press a button or set a rule to turn the power on to that outlet. There's button on the Switch, so it can also be powered off.

Given we only watch the TV in bed at night, we set a rule that turned the power on at bedtime and powered off after an hour – so that we didn't stay awake until the wee hours channel surfing through infomercials.

The bottom line. The WeMo Switch can deliver some power savings through automation, making it easy to turn off hard-to-reach power outlets.

WEMO INSIGHT SWITCH
Price: $99.95

The WeMo Insight Switch is similar to the WeMo Switch, but adds some power monitoring smarts to the mix.

We connected the WeMo Insight Switch to the power outlet running our home entertainment setup with an Xbox, Smart TV, Blu-ray player, Apple TV and a few other bits and pieces. All of those are connected to a single power board that is then plugged into the power outlet via the WeMo Insight Switch.

Typically, all those devices would be sitting on standby, slowly leaching

a few kilowatts of power every day. We track power consumption pretty closely so we're acutely aware of day-to-day power use. For example, on the weekends when the kids all have their laptops connected to the network, pulling down lots of content, leaving lights on all day (because they haven't yet understood how switches work – or is that just our place?) and watching TV or playing console games – there's a noticeable increase in the amount of power used.

With the WeMo Insight Switch, we've been able to stem that slow bleed by turning the power off when we're not watching the TV or using the other gear.

In addition, we can see how much power the entertainment rig is using and even allocate costs to it. If you check your power bill, you can determine the cost per kilowatt per hour and set it in the app.

Bottom line. The WeMo Insight Switch makes it easy to control devices and track costs. 🖱

– ANTHONY CARUANA

WEMO
www.wemo.com

PROS Easy to set up; potential power savings

CONS Occasionally can't find devices; performance lags

VARIOUS PRICES

PopCast media player for Apple TV

A Swiss army knife streaming media app, PopCast lets you fling a wide range of video formats around an Apple-centric home.

The Apple TV is great for watching video files on your television, as long as you're happy to stick with iFriendly file formats and stream from iTunes or an iGadget. PopCast lets you break these shackles, streaming almost any video format from a computer to an Apple TV or Google Chromecast plugged into your television. For now PopCast only runs on Windows, with support for Windows 10, but there's a MacOS version on the way.

The free trial version lets you stream five minutes of video, which should be enough to determine whether PopCast meets your needs. The app transcodes video formats on the fly to appease the Apple TV, which means you'll want to run it on a reasonably powerful Windows computer, especially if you're streaming high-definition video. Transcoding on the fly can offer a more convenient alternative to regularly batch converting downloaded videos just so that they'll play nicely with the Apple TV.

The PopCast app notifies you if your computer is struggling under the load, but you'll know because you'll have connection issues and the video will regularly pause to buffer. Windows devices with Intel Atom processors will struggle to make the grade when it comes to 1080p video and perhaps 720p. You're also at the mercy of the quality of your Wi-Fi network; if it's flaky you may get better results switching across to Ethernet.

The PopCast app features an Airplay-style drop-down menu listing Apple TVs and Chromecasts connected to your home network. You will need iTunes installed on your PC, so PopCast can use Apple's Bonjour networking format. If your Smart TV or Blu-ray player is a DLNA renderer, visible to iOS streaming media apps like 8player, it's unlikely to be visible to PopCast.

There are no remote control features for PopCast. You need to be in front of the computer, so you'll probably want to run it on a notebook PC rather than a desktop PC tucked away in the study, unless you're

prepared to walk from the couch to the study just to press play.

If your PC has the grunt to keep it happy, PopCast could make a handy addition to your streaming media toolkit. The picture quality is great and it supports a wide range of formats including MPEG 1/2/4, DixV, MOV, MP4, M4V, MKV, OGM and WMV, but not copyright-protected files like iTunes movie downloads. It will play M2TS files ripped from Blu-ray discs using an app like AnyDVD HD, but not VOB or ISO files ripped from DVDs.

Using PopCast is simple, you can either drag and drop files into the PopCast window or queue up a playlist. It can play video files from USB storage or across your network from another computer or network drive, assuming you network can cope. PopCast won't recognise DLNA media servers.

Bottom line. There's more than one way to get video files on your television, so whether or not PopCast is a good fit for your lounge room depends on what else you have at your disposal. Considering that you need a powerful PC (or eventually Mac) at your disposal, it may be easier to install a transcoding media server like Plex on that computer and then use the Plex iOS app to stream video to your Apple TV or Chromecast. This way you don't need to be sitting in front of the computer to send video to the television.

If you're happy to drive everything from a PC, then PopCast may be the app you need to make the most of your Apple TV.

– ADAM TURNER
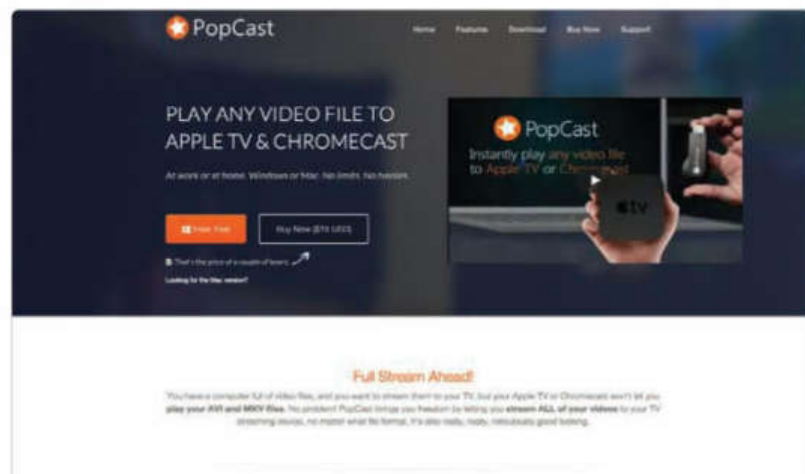
	POPCAST
	www.popcastapp.com
PROS	Wide format support
CONS	Needs a powerful PC
US$15	